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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

TRENDS IN MARKETING COSTS AND PRACTICES
- The Longer Term Outlook -

Talk by Kenneth E. Ogren
Marketing Research Division
at the 34th Annual Agricultural Outlook Conference
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O & R-PREP.

The outlook for marketing costs in the coming year is a continuation of the steady rise of recent years. On the basis of past experience and present economic indications, no early reversal of this trend can be foreseen.

With respect to the longer term outlook for marketing costs, the following projections seem likely:

1. Services performed by the marketing system in getting products from the farm to the consumer in the time, form, and place desired will increase relative to services performed by farmers in producing the raw materials needed.
2. The number of workers employed in the processing and distribution of farm products, as well as the total resources used by marketing firms, will increase relative to workers and resources in agriculture.
3. The total costs for processing and distributing farm products will increase relative to agricultural production costs. Or, stated in more familiar vernacular, marketing costs will make up an increasing share of the consumer's dollar.

If we assume an expanding economy with rising real incomes, as Mr. Cavin has projected for us this morning, none of these propositions should be startling. With higher incomes and further technological advances, services that consumers want and get with their food products are likely to increase at a faster rate than farm inputs in the form of raw materials going into these foods.

My discussion and charts this morning are primarily about food, not only because more data are available for food products but because these products account for 80 to 90 percent of agriculture's returns from farm products sold to domestic civilian consumers. Also, a note on terminology. My use of "marketing" includes all processing, distribution, transportation, and other services performed after sale of agricultural products by farmers. In other words, it is an "institutional" separation by agriculture and nonagricultural groups rather than on a strictly functional basis.

More Marketing Services

A precise quantitative measurement of marketing services is not available. But, with the increasing importance of processed and prepared foods, purchased meals, and the general trend towards an "urbanized"

economy, there is not much doubt about the growing importance of these services. These added services have been a major factor in maintaining food expenditures at around one-fourth of consumer income over the last two decades.

In a recent AMS study of the long-run demand for farm products, the demand for services was estimated to be around five times as responsive to changes in income as the demand for food products at the farm level. ^{1/} Increases in per capita real income of 50 percent or more by 1975 were projected in this study. Substantial increases both in workers and resources will be needed to provide the additional marketing services indicated by projected increases in incomes and population.

Except for the depression in the early 1930's, the number of workers in marketing food have increased steadily while the number in agriculture have shown an almost continuous decline (fig. 1). The number of workers in marketing is likely to continue to increase, with a rise of one-third to one-half possible by 1975. With continued increases in productivity, the number of workers in agriculture is likely to be less in 1975 than at the present time.

Note that the lines on this chart are index numbers and are not comparable in terms of actual numbers. In marketing, only food is included — estimates based on census data indicate that more than 5 million workers are engaged in the processing and distribution of food products with at least 10 million for all farm products. These are equivalent full-time workers. The number of workers in marketing agricultural products now exceeds that in agriculture by several million, but direct comparisons cannot be made from available series.

The next chart compares dollars going to marketing agencies for processing and distributing food with dollars going to agriculture (fig. 2). The food-marketing bill has increased steadily since the mid-1930's while agriculture's share, as is typical, has fluctuated more. If we smooth out the peaks in the agriculture line that are associated with World War II and the Korean conflict, we have a pattern of the marketing bill increasing relative to farmers' returns. In 1955, the proportion of consumers' farm food expenditures going to agriculture was less than in any year since the early 1930's. In this chart I am using estimates that involve all marketing services between the farm and the consumer, including those for meals eaten away from home. It is not the usual marketing-bill measurement of farm-to-retail-store charges that may be familiar to some of you.

With workers and services in marketing increasing relative to those in agriculture, we can expect total returns to marketing agencies to increase relative to total returns to farmers. Projections to 1960 indicate that the marketing total may increase another 6 or 7 billion dollars, or about 20 percent over the 1955 level of 32.5 billion dollars. This assumes that marketing costs per unit of product marketed may continue to rise by the

^{1/} Daly, Rex F., "The Long-Run Demand for Farm Products," Agricultural Economics Research, VIII. 3:73-91, July 1956.

current rate of 1 to 2 percent per year, that volume of food products marketed will increase by a total of 8 to 9 percent between 1955 and 1960, and that some additional costs will come from increased services. The 1955 figure of 18.3 billions to agriculture would not rise much above 20 billion unless there were marked changes in the level of farm prices.

Many of you are in the forecasting business in one way or another, so I need not worry that you will be too impressed with the sanctity of any of these projections. The more significant part of this longer term outlook for more services, more resources, and more dollars for marketing is a recognition of the dynamic factors in our economy that cause these changes and resulting adjustments that affect both agriculture and marketing.

Population Growth and Suburbanization

Population growth is always a key factor, as it increases the overall demand for marketing services and the facilities and resources needed. But changes in the composition of our population are of special significance to marketing. Between 1940 and 1955 the total population increased 25 percent with nonfarm population rising over 40 percent and the farm population shrinking 23 percent (fig. 3). The gain in the nonfarm population was primarily responsible for a 43 percent increase in the volume of farm food products going through the marketing system. Farm families get a sizable proportion of their food supply from their own production and for the food they do buy generally less processing and packaging is used. But people on farms are increasing their food purchases and also buying more services with their food.

"Suburbanization" is the most striking development of our population growth in recent years. Between 1950 and 1955, practically all of the 12 million growth in population was accounted for by the gain in the population of the 168 standard metropolitan areas. Population in the central cities of these metropolitan areas increased 2 million, or 4 percent; the areas outside the central cities -- the suburbs -- increased by more than 9 million, or 28 percent. These suburban areas have required new stores and other facilities with large investments. Indirectly, these developments have probably provided the greatest stimulus to the rapid growth of modern supermarkets, large mechanized warehouses, and other facilities that at the same time have made obsolescent many of the existing facilities in areas of little population growth.

These trends toward suburban living have been accelerated during recent years and there is every reason to expect that these population shifts will continue.

Technology

Technological developments in food processing and distribution by their very nature are almost impossible to predict over any long period. But as they do have profound effects on agricultural production and consumer demand as well as marketing, the potential effects of technological innovations need continual appraisal. One of these is radiation sterilization for preserving perishable foods. Like many other potential developments, it may seem quite remote at present but, if perfected, it would have far-reaching effects.

The rapid growth of the frozen food industry has been sparked by technological developments as well as greater consumer demand for processed foods. As shown in the chart, fruits and vegetables constituted the major part of the industry output following World War II (fig. 4). Beginning in 1949, citrus juice concentrates, principally orange juice, gave a big push to the industry. Recently the most rapid increase has been in prepared foods, which includes a wide variety of foods such as poultry and meat potpies, frozen potato products, and frozen prepared dinners. A sizable proportion of poultry is frozen but relatively little red meat. However, a large expansion in the freezing of red meats is possible over the next few years which, if realized, would have special implications for livestock producers, meat packers, and retailers as well as all parts of the frozen food industry. 2/

Marketing Practices and Institutions

Food retailing is one of the many segments of our economy going through a significant metamorphosis. Data now available from the 1954 census provide some striking comparisons. Retail food stores are getting larger. In fact, the average size increased so much that despite the large increase in total sales between 1948 and 1954 the number of stores declined more than 20 percent (fig. 5). The number of grocery stores with annual sales of over 1 million dollars more than tripled between 1948 and 1954. These large stores were still less than 2.5 percent of the total number of grocery stores in 1954 -- 6,000 out of 270,000 -- but they accounted for almost one-third of total sales. Average sales per retail store (deflated for price change) increased more than two and one-half times between 1939 and 1954, with a large part of that increase occurring between 1948 and 1954 (fig. 6). The number of workers in grocery stores increased over this 15-year period but sales per worker were up by more than 50 percent (fig. 7).

These trends are likely to continue. Large potential growth exists both in the average volume per store and sales per worker. The average sales volume of \$123,000 per store in 1954 was only a fraction of the annual sales of a typical supermarket. The supermarket will be, even more than today, the predominant outlet for farm produce.

Mergers in recent years have speeded up the growth in size of food retailing firms. A trade paper reported that during last year through mergers 30 grocery companies acquired 1,610 stores mostly supermarkets. Chain stores, however, do not seem to be taking a significantly larger share of the grocery business. Many independents have met chain-store competition by joining wholesaler groups that give them the advantages of large-scale buying. Both chains and these wholesaler groups to an increasing extent either process their own products or contract for processing under their own private brands. Thus, the market for farm products will be increasingly concentrated among a smaller number of firms.

2/ A comprehensive review of the outlook for frozen foods is given in the current Outlook Issue of The Marketing and Transportation Situation, MTS-123, pp. 17-43.

The merchandising practices of many of these retailing firms together with their large sales volume require the delivery week after week of large lots of produce of a uniform quality. To help them accomplish this, some of these large firms have been making increasing use of Federal inspection services and grades. The need for larger lots of farm products will favor the larger production areas which often are far from major consuming centers over fruit and vegetable farmers and other farmers in nearby market areas.

Changes in the structure of the food processing industry also are likely to have impacts on marketing and agriculture. Plants are increasing in size; economies of scale have been the principal stimulus. Over the last decade processors have made large investments in plant and equipment (fig. 8). Investments were especially large during 1947 to catch up after World War II but they have remained at the high level of around 3/4 billion (in 1955 dollars) in recent years.

The wider application of automatic machinery may accentuate the trend toward larger plants. This will increase the need for a large volume and steady flow of raw materials within an area of relatively low transportation costs. In some cases this may lead to more processor control over production of raw materials through farm ownership or more closely supervised contracts with growers.

Costs and Productivity

To many observers it may seem that the marketing system is running faster and faster but losing ground all the while. From 1952 through 1955, the general price level, as measured by the Wholesale Price Index, was stable; however, unit marketing costs (gross marketing margins), as measured by the "market-basket" price-spread series, increased from 1 to 2 percent each year. Actually, the sliding off of prices of the raw material subgroups of the WPI was what kept this index, as well as the Consumer Price Index, relatively stable. The components of the WPI for articles bought by marketing firms, such as paperboard and paperboard products, metal and glass containers, machinery and motor vehicles, and other manufactured or semimanufactured articles, have increased steadily. This trend is shown by the line "other costs" in chart 9. Considering the rise in prices of factors used by marketing firms, the average annual rise in unit marketing costs of 1 to 2 percent in recent years is relatively small (fig. 9). Most of the sharp decline in the farmer's share of the consumer's food dollar which has received so much attention was the result of lower farm prices rather than higher marketing costs.

In projecting an increase of some 20 percent in the food marketing bill over a 5-year period, I assumed a continued gradual increase in unit marketing costs. The actual changes are obviously going to be tied to trends in the general price level. Even with a fairly stable price level, however, it would appear that the pressure on marketing margins and costs will be mostly upward. Marketing margins have been traditionally inflexible in comparison with farm-product prices. Higher taxes, higher depreciation charges on plant and equipment, wage contracts, minimum wages, and occasionally

guaranteed annual wages are all contributing to less flexibility in the costs making up these margins. Nearly all transportation charges were increased this year, with new increases in rail freight rates of up to 22 percent now being petitioned by most of the nation's railroads. Hourly earnings of food marketing employees have been increasing steadily by 4 or 5 percent annually, in addition to increased fringe benefits, and may continue to increase at that rate. (Wages in the textile industries have not kept pace with the food industries, partly because of the less favorable demand for these products and associated regional "recessions.") Not all parts of the food industry are likely to be able to offset these increases by greater productivity. The prospect for continued cost increases adds to the pressure for replacing outmoded and obsolescent facilities and equipment, although replacement of them adds to depreciation costs and the investment cost structure.

Productivity changes in marketing are difficult to measure precisely. Because of the higher proportion of personal services in retailing, it may be reasonable to assume that productivity may lag somewhat behind that in the agricultural and manufacturing segments of our economy. However, an earlier chart on retailing pictured a substantial increase in sales per retail worker. The number of workers in food processing, according to census figures, has remained almost constant over the last 5 years, with a large increase in food processed. We see by the next chart that labor costs per unit of product marketed have increased by a considerably slower rate than wage rates (fig. 10). Furthermore, the data, although not conclusive, point to a relatively greater increase in labor output in recent years than in the immediate postwar period. This may represent in part the cumulative effect of large postwar investments. But this may be offset in part by higher capital expenses. Data available from the Commerce Department indicate that capital consumption allowances (mainly depreciation charges) represent an increasing share of corporate gross product. (Data are for all corporations, not just food-marketing firms.)

I have given this morning a broad sweep of several factors that are likely to affect the longer term outlook for marketing costs and practices. Many others have been left out. Inadequate historical data in some cases make predictions of the future impossible. Nevertheless, we can be certain of changes that will create problems, some of which may be solved by research workers and others which may involve policy decisions outside both the area of research and managerial decisions. Through an organized and continuing appraisal of the marketing situation, however, we should be able to provide information to farmers, marketing agencies, and consumers as well as public policy groups that will facilitate and expedite adjustments to these changes in an expanding economy.

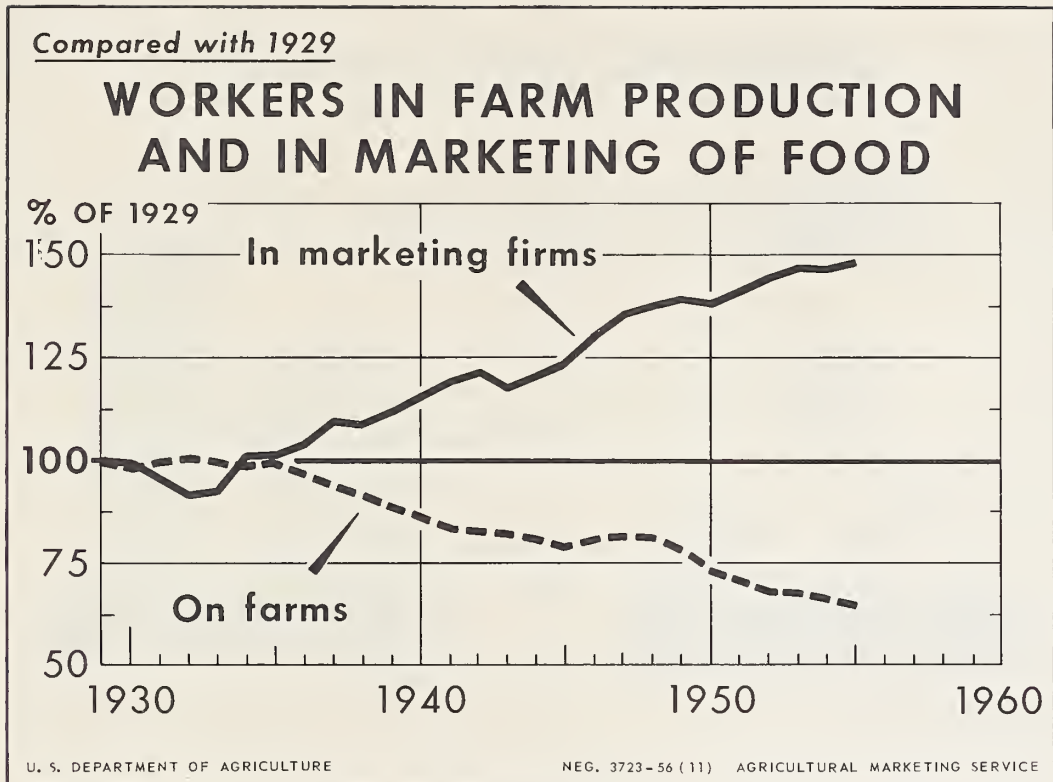


Figure 1.

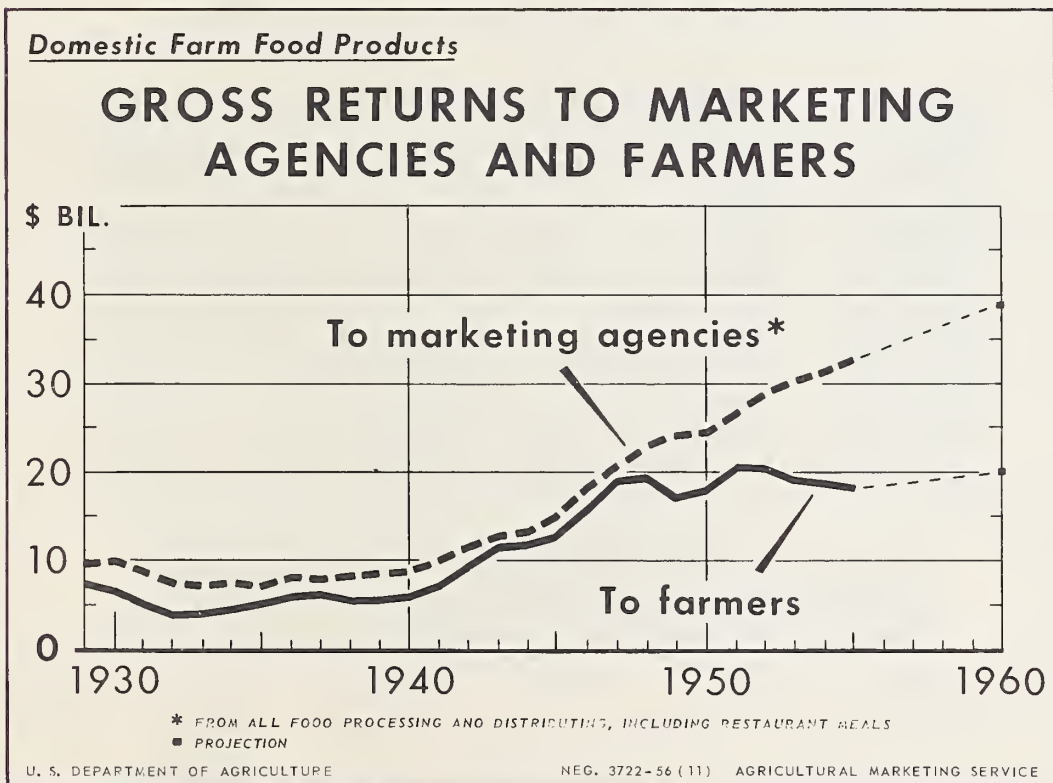


Figure 2.

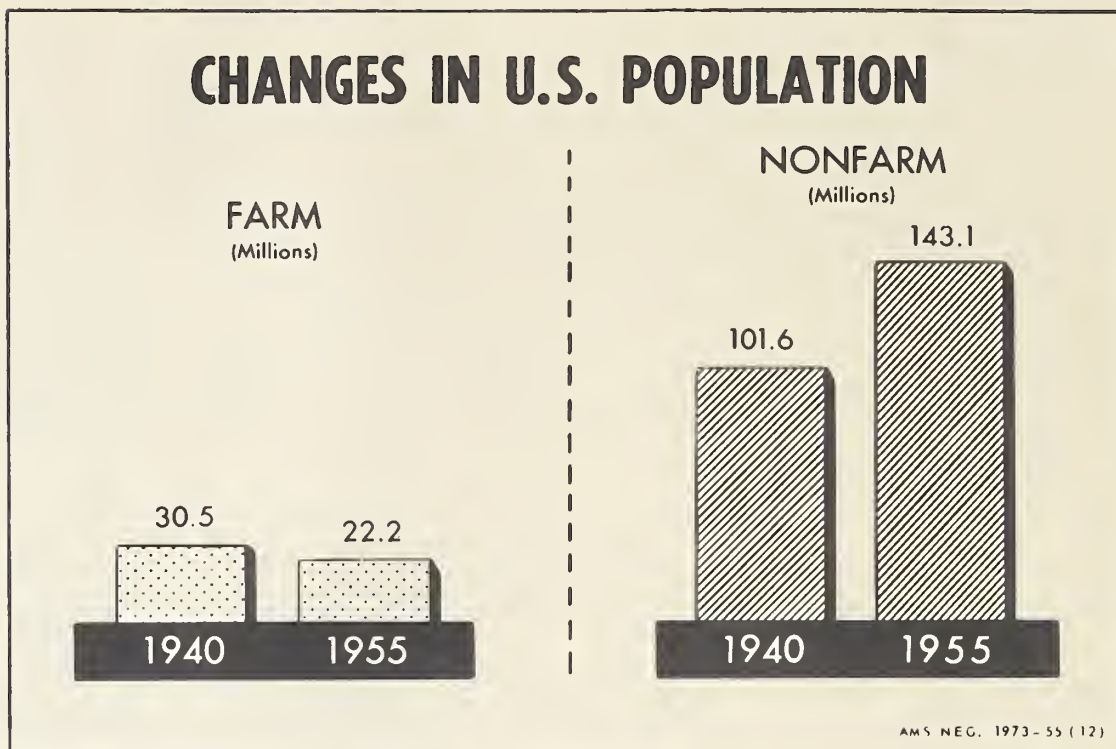


Figure 3.

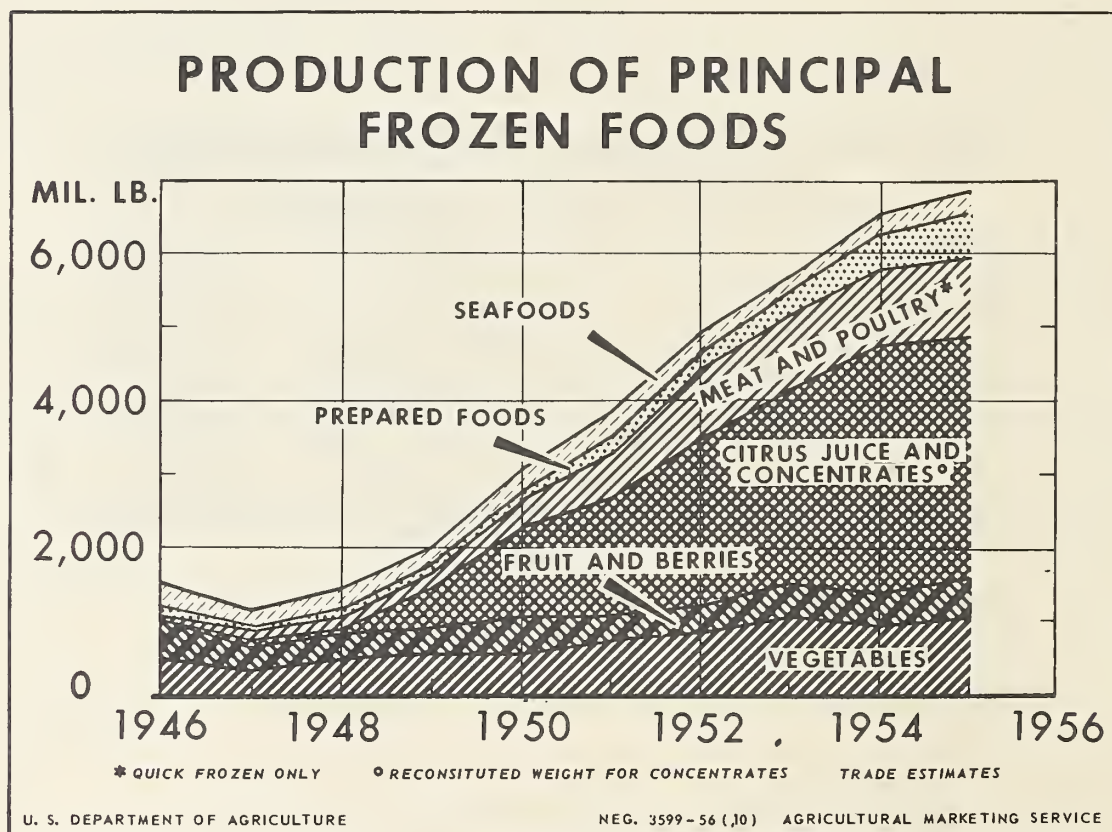


Figure 4.

RETAIL GROCERY STORES



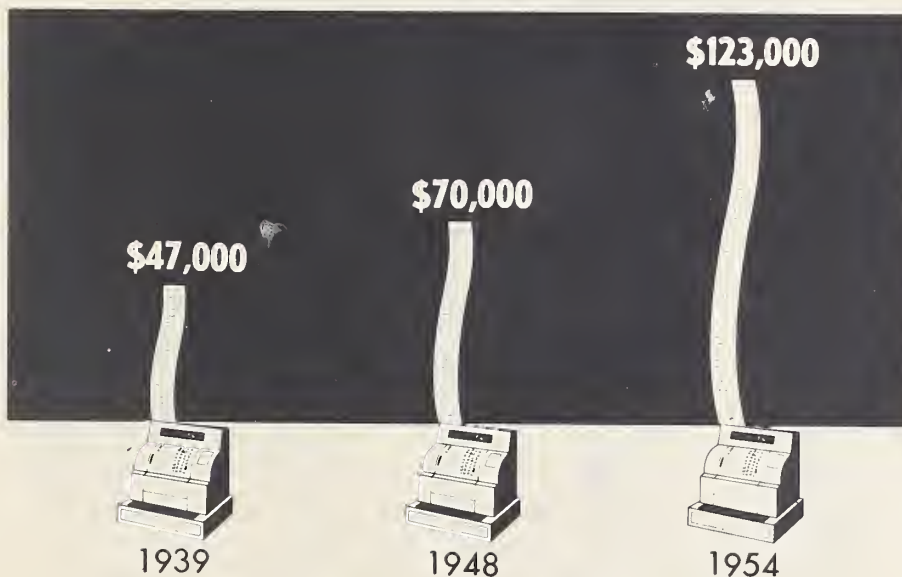
U. S. Department of Commerce, Bureau of the Census.

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Figure 5.

AVERAGE SALES PER RETAIL GROCERY STORE



Based on Bureau of the Census data. Sales in terms of 1954 retail food prices.

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Figure 6.

In Retail Grocery Stores

AVERAGE SALES PER WORKER



Based on Bureau of the Census data. Sales in terms of 1954 retail food prices.

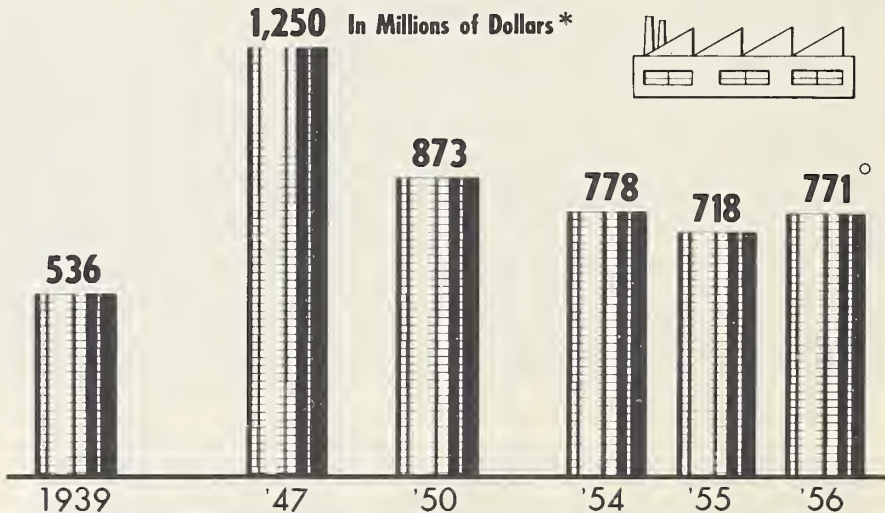
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Figure 7.

Food and Beverage Manufacturers

PLANT AND EQUIPMENT INVESTMENT



* Estimates in 1955 dollars (except that for 1956) derived from Dept. of Commerce and Securities and Exchange Commission data.

^o Preliminary

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Figure 8.

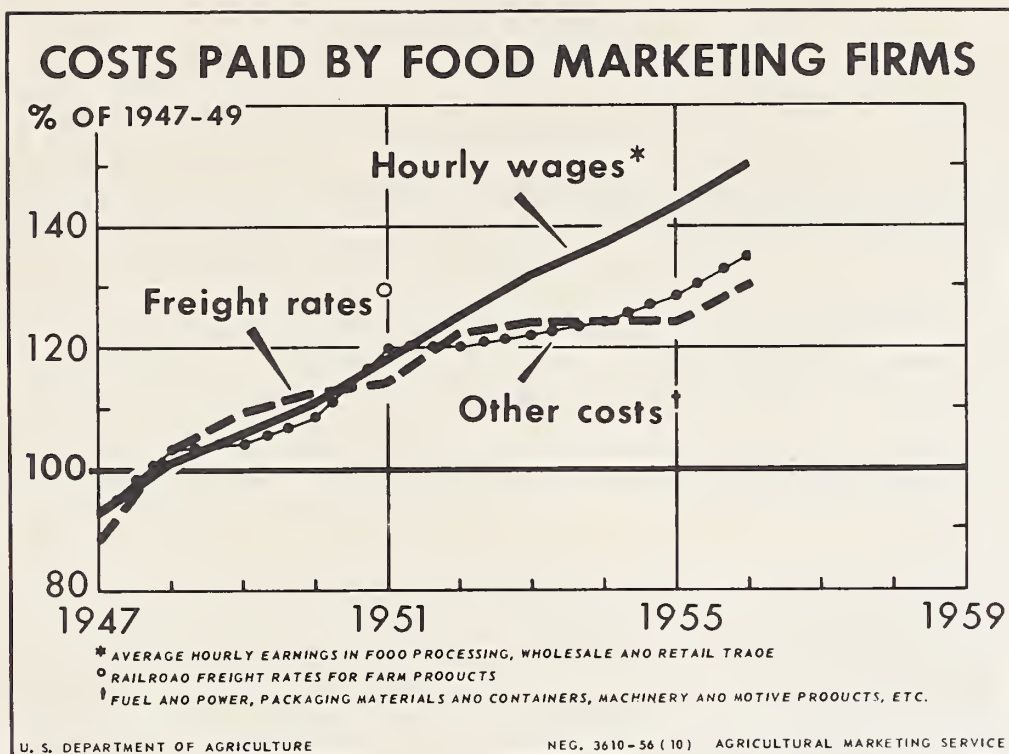


Figure 9.

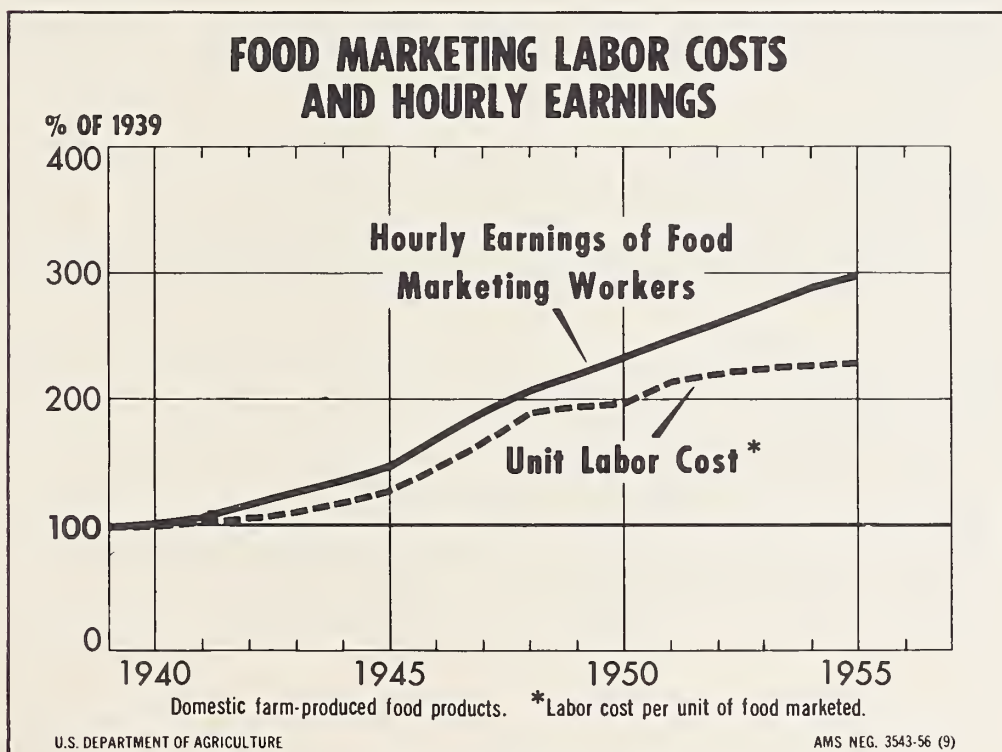


Figure 10.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Economic Research Service
Washington, D.C.

AN ECONOMIC INTERPRETATION OF WHEAT, FLOUR, AND BREAD PRICES

Address by Kenneth E. Ogren, Director, Marketing Economics Division,
before the Fourth National Wheat Utilization Research Conference,
Boise, Idaho, November 3-5, 1965

From the days of cocklebur butterflies to the present day National Commission on Food Marketing, the obstacles to data collection have grown as rapidly as have the needs for statistics.

In the early 1900's bread on the grocery shelves was an undifferentiated product. There were no packaging, no advertising, and no problems determining a retail price.

Some of the changes this century which complicated the collection of data on white bread have included the first commercially wrapped bread in 1908 or 1909, which elevated bread from "a pile of cord wood" to a "branded, protected, processed food;" ^{1/} the first sliced bread in the late 1920's; the first jumbo loaf, advertised as "more for your money," after the depression of the 1930's; and the enrichment advertising prior to World War II. Since World War II several innovations have been introduced. These include the round loaves, resealable wraps, and ironically an attempt by some bakers to duplicate the old home baked style. Just 60 years earlier, the industry had convinced the housewife to give up home-made bread in favor of "baker's" bread, which, incidentally, became one of our earliest convenience foods.

Each of these innovations helped bakers to differentiate their products. It is not uncommon to walk into a supermarket today and find over 20 varieties and types of bread on the shelf. White bread is no longer a food item, but rather a full line of food items. Therefore, what are we talking about when we speak of white bread?

Couple this question to the fact that the assembly of wheat may follow several different channels of trade. Transportation of products may be by rail, truck, or water. Flour millers mill more than just white bread-type flour. Bakers make many products in addition to white bread. Distribution of products is made in several methods. And retail prices vary for numerous reasons. We have a very complicated picture indeed. By keeping in mind the obstacles to determining the average U.S. price of white bread, you will understand some of the problems we face and the reasons we are striving to improve our price spread studies.

^{1/} E. J. Sperry and Jack A. Cohen, Bread Brands, E. J. Sperry-Industrial Publications, Chicago, 1949.

Our published price spreads for white bread have, in the recent past, been based on the best secondary data available for estimating the various components of the price of a loaf of bread. Let me briefly explain these to you.

For the farm value, we use the average monthly price received by farmers for wheat as reported in the USDA Agricultural Prices series. The Statistical Reporting Service assembles these prices from reports by field men throughout the wheat-producing regions.

The cost of wheat to millers is based on the average price of hard red winter and hard red spring wheats at six markets adjusted by the Census of Manufactures' reported cost of wheat to mills. The mill sales value of flour also is based on average flour prices at major markets and adjusted by the Census of Manufactures' reported mill sales value.

The cost of flour to the baker is based on the adjusted mill sales value of flour multiplied by the amount of flour per pound loaf (0.641) as reported by the baking industry and the American Institute of Baking. The cost of other ingredients to the baker is based on various industry trade reports.

The wholesale price of bread is based on the average wholesale price for four cities (New York, New Orleans, Chicago, and San Francisco) as reported by the Bureau of Labor Statistics, adjusted according to a National Bread Price Survey and the BLS average retail price.

The retail price of bread is based entirely on the weighted average price as reported by the Bureau of Labor Statistics.

BLS field agents price the largest volume selling loaf in each of their sample stores; BLS specifications call for pan-style bread, wrapped, prepared from white flour. This is white bread. Yet, the volume selling white bread in one part of town may be much different than that selling in another part of town; and the volume selling white bread may account for a small percentage of total white bread sales in some stores.

Hence, our farm-retail price spread series for white bread, based on these data sources are only the best approximations possible. We have continually adjusted our data to take into account technological and other changes. Although we realize our series is only approximate, we are, nevertheless, confident that our white bread price spreads have accurately reflected changes over time.

With this background of how we have arrived at the price spreads for white bread, let's look at the price of a loaf of bread and the change in the component price spreads.

Who Gets What and Why?

Unusually intense interest has been paid to white bread prices during the past year because of the wheat certificate issue and the proposed farm legislation. In response to this strong interest, the Department published a leaflet designed to answer the question, "Who gets what and why?" ^{2/} Data in this leaflet showed that the average retail price of bread did not increase in 1964 for the first time since the 1947-49 base period. The average price of a 1-pound loaf was 20.7 cents in 1964, equal to the 1963 price.

I might add at this point that the data presented in this leaflet were based on a new series of retail bread prices. Effective January 1964, BLS changed its sample and processing procedures to get a more representative sample. As a result, white bread prices were lowered. To maintain a comparable series, we adjusted our figures accordingly. To give you an idea of the magnitude of the adjustment, the 1963 average retail price of a 1-pound loaf of white bread was adjusted downward from 21.6 cents to 20.7 cents.

Now let's look at the average price of a loaf of bread in the first 9 months of 1965. Figure 1 shows us that the U.S. consumer paid an average of 20.9 cents for a 1-pound loaf of bread. Generally, the price of bread was divided about the same in 1965 as in previous years, with the baker-wholesaler function accounting for most of the farm-retail spread. The farmer's share and the retailer's share increased over the 1964 level by 0.1 and 0.2 cent, respectively. The miller's share decreased from 0.9 cent in 1964 to 0.8 cent in the first 9 months of 1965. The baker-wholesaler's share (11.4 cents) and the amount shown for transportation, handling, and other processing (1.5 cents) remained the same in the first 9 months of 1965 as in 1964.

My next chart (fig. 2) shows the change in the retail price of a pound loaf of bread since 1947-49 and the changes in the distribution of the retail price among the retailer, the baker, the miller, and the farmer. The most significant statistic on this chart is the rise in the price of bread from 12.7 cents in 1947-49 to 20.9 cents in the first 9 months of 1965, a 65-percent increase. Since about 1961, the retail bread price has tended to level off. However, the up-turn during the first 9 months of 1965 may indicate that the period of level prices may be broken.

The main reasons for the increase in the retail bread price since 1947-49 are the higher costs of baking and distributing a loaf of bread. Almost all costs are up--wages, wrapping materials, vehicle expense, and selling costs. Hourly earnings of production workers in bakeries rose from \$1.15 in 1947-49 to \$2.40 in 1964.

^{2/} "Bread and What Price Trends," ERS, USDA, April 1965.

In recent years the baking industry has found ways to offset some of these cost increases through mechanization and other labor-saving methods. These savings have been especially evident when the price rise has averaged less per year in recent years than in the early part of the post-war period.

The baker-wholesaler price has risen nearly as fast as the retail price since 1947-49, 57 percent as compared to 65-percent increase in the retail price.

The farm value of wheat and mill sales value of flour have remained relatively low. The farm value (2.7 cents) was exactly the same in the first 9 months of 1965 as in 1947-49. The value of flour increased slightly from 3.4 cents in 1947-49 to 3.9 cents in the first 9 months of 1965, or about 15 percent.

Figure 3 will show you a very vivid picture of how the farm-retail price spread has widened since 1947-49 in relation to the farm value of the ingredients in a loaf of bread. The farmer's share was 26 percent in 1947-49. In the first 9 months of 1965 it was 16 percent.

Figure 4 shows the change in the retail bread price and the farm wheat price in percentage terms (1947-49 = 100). Again this chart shows a similar picture. The retail prices are steadily increasing, although at a slower rate in recent years. The price received by farmers for wheat has shown a relative increase in the last 3 years.

Who gets what and why? An economic interpretation of wheat, flour, and bread prices must not stop with what appears on the surface of a chart depicting shares taken by various marketing agencies. The farmer's share is low. The miller's share is declining. Apparently, neither of these two sectors is getting rich off the production of wheat and flour going into white bread. But the percentage share is not a satisfactory measure of profits.

The baker-wholesaler gets the largest share of the consumer's white bread dollar. Yet figure 5 will show you that the profits of the five major baking companies are actually decreasing while at the same time the wholesale price is increasing. Since 1947-49, profits as a percent of sales have decreased generally, with a rather sharp decline in the early 1960's. Although it is too early to know the profit level for 1965, first and second quarter figures indicate that the profits of the five major baking companies before taxes are the same as in corresponding quarters in 1964. Profits after taxes appear to be slightly higher, standing at 1.1 percent as compared with 0.9 in corresponding quarters in 1964.

An economic interpretation of the retail price spread is most difficult when narrowed to a 1-pound loaf of bread. At this time we do not have a sufficient amount of data to explain the component

parts of the retail margin. We do know that it has widened at about the same rate as the baker-wholesaler margin and expect that some of the same causal factors are at work. A look into food retailing is one of the major tasks of the Food Commission. Hopefully, some light will be shed on the economics of retailing.

After a careful examination of who gets what, it seems that the farmer, the miller, the baker, and probably the retailer do not get what it appears that they get. But why? The increase in the price of white bread is not caused by the actions of the miller or the baker, but rather effected by an economic phenomenon known as "cost push." The concept "cost push" is one which may exist only when there is excess capacity and the absence of a "demand pull." This is the situation in which much of the industry involved in the production of white bread finds itself today. The costs of inputs have been pushed up necessitating higher prices to cover costs. Wage rates, for example, increased 109 percent from 1947-49 to 1964. Only technological innovations prevented a much greater increase in prices.

What Are We Doing to Improve Our Statistics?

Seemingly statistics are becoming more and more a vital part of our life. It is in the changing nature of our society that statistics, with all their impersonal context, become the basis for more and more opinions and decisions for the public at large as well as farmers, businessmen, and lawyers. These changes in our society intensify the need for greater accuracy of statistics--at a time when rapid change in our economy intensifies the challenges and the problems for those who develop these statistics.

In the past year, Department representatives have met with milling and baking trade associations and industry members to study the data sources and computational methods used in our price series. These meetings were very fruitful in our efforts to obtain more accurate statistics. For example, the Millers' National Federation provided the Department with its first sound evidence of the trend toward bulk shipments. When account is taken of this lower price of flour used in a loaf of bread, this lowers the estimated price received by the millers for flour by about 0.1 cent and, hence, lowers the miller's flour spread estimated for February 1965 from 0.8 cent to 0.7 cent. This is not a large change, but percentagewise it is a significant change.

The meeting of milling and baking representatives with the Secretary of Agriculture last November provided an impetus for improving the statistics on flour prices paid by bakers. Thus far, we have received a generous amount of data on flour prices from several baking companies. These data are being used to evaluate the series of flour prices collected and published by the Bureau of Labor Statistics which currently provide the base for our estimates of flour cost and prices.

The National Commission on Food Marketing also has been instrumental in furthering industry-Government cooperation. Prior to the creation of the Commission, Government-industry cooperation was just in the bud. Now there are signs that this cooperation may reach full bloom. Recently members of the Commission, the U.S. Department of Agriculture, and the industry have met several times to study the problem. From these discussions has developed a fruitful interchange of information. There is now an improved understanding of our statistics and what is needed.

We need more than periodic Census of Manufactures' data to derive accurate white bread farm-retail price spreads. We need more than the data collected by the Bureau of Labor Statistics from food stores that voluntarily report their selling prices.

With the cooperation of the industry and the added interest and insights provided by the Food Commission, we expect to improve substantially our basis for computing price spreads.

The Food Commission with the Department's cooperation is making detailed cost studies of the milling and baking industries. In both cases, these studies involve the collection of detailed cost information--cost of materials, manufacturing costs, administrative costs, and selling and distribution costs. Since our cost spread studies are necessarily based on U.S. averages, these studies will help us determine if our present methods are in reality properly based. The milling study, for instance, will provide us with the flow of whole wheat to mills by point of purchase by mill and by type of transportation. We will learn more about the transportation bill and who pays it. We will be able to determine distribution channels by sales outlets and again by type of transportation used.

We hope to obtain similar data from wholesale and chain store bakers of white bread. Also, we are asking for separate sales and distribution information on private label and manufacturers' brands of white bread. This is an area that we have not explored in the past.

There is growing evidence that price spreads vary greatly depending on whether we are talking about private label bread or manufacturer brands. In a recent study it was found that 71 percent of the bread sales of six selected food chains involved private label bread.^{3/} According to this study, the net margin before taxes per 1-pound loaf of private label bread averaged 0.5 cent during 1959-63. This compared with an average net margin before taxes of 2-3/4 cents on a 1-pound loaf of manufacturers' brand bread.

^{3/} "Marketing Costs and Margins: Current Use in Agribusiness Market Structure Analysis," paper prepared by Ray A. Goldberg, Harvard Business School, for the American Farm Economic Association meeting, Oklahoma State University, Stillwater, Oklahoma, August 25, 1965.

- 7 -

Along this line, the Department hopes to strengthen its pricing data at the retail levels. At present, BLS data is our only source. BLS retail prices are collected monthly by field agents from a sample of chain and independent retail food stores who voluntarily report their selling prices. Prices for the designated sample are collected monthly on Tuesday, Wednesday, or Thursday of a specified week preceding the 15th day of the month. Prices collected are those for the largest volume selling loaf on the day of the agent's visit and include any sale or weekend special prices which are offered on that day. The primary purpose of BLS prices is to measure change, not to provide data for price-spread studies.

Because white bread is marketed in many forms, types, and varieties, actual pricing practices may not be reflected by only obtaining the price of the volume selling loaves. The Department has no reason to believe the volume of white bread moving on weekend sales as opposed to the earlier part of the week may differ. We have evidence of price differences by income areas of a given city. BLS weights observed prices on the volume selling white bread on the basis of the food sales of chain grocery stores, other large stores, and small food stores. This does not take into account the inelastic demand for white bread. In other words, white bread sales relative to total food sales would be expected to be less in higher income than in lower income areas. However, the total quantity of bread products sold may be more responsive to income levels than in white bread alone. There is some evidence that higher-income families buy increasing amounts of specialty breads and other pastry goods may be purchased.

In addition to the flour milling, wholesale and chain bakery studies, we are working in another area. In cooperation with the ASCS, the ERS is conducting a detailed analysis of the grain assembly operations. In cooperation with Oklahoma State University and the Texas Transportation Institute, we are collecting transportation cost data on both wheat and flour. These studies will provide added information on another important area which makes up about 7 percent of the farm-retail spread.

As each of these areas is studied, we are attempting to better understand and separate our transportation costs by method of distribution.

Where to From Here?

We can identify with reasonable accuracy the relative shares of a loaf of bread, e.g., the baker, the largest share; the miller, less than 1 cent; the farmer, about 3 cents for all ingredients; etc. But being close only counts in a game of horseshoes. Absolute accuracy is relative to current questions asked by Congress and the Food Commission. It is a more difficult problem to measure the exact

figure to 0.1 cent month after month, year after year. The exact figures can be derived only with close industry-Government cooperation.

White bread farm-retail spread information is proving to be a much observed performance measure. These statistics provide the public--farmers, consumer, and Congress--with up-to-date information on trends in prices, costs, and profits. Interest in the farm-retail spread of all food products was apparent in the creation of the National Commission on Food Marketing. Interest in a specific farm-retail spread was evidenced in the recent proposed farm bill. If legislation is to be influenced by economic interpretations, then it behooves private industry to see that such economic interpretations are based on complete and accurate information.

The Department will continue its efforts to improve its data by working closer with the industry. Efforts also will be concentrated towards keeping abreast of important changes in the marketing system that affect the price spread at any and all levels. We will be interested in the component costs of manufacturing, integration practices, channels of distribution, prices, and profits.

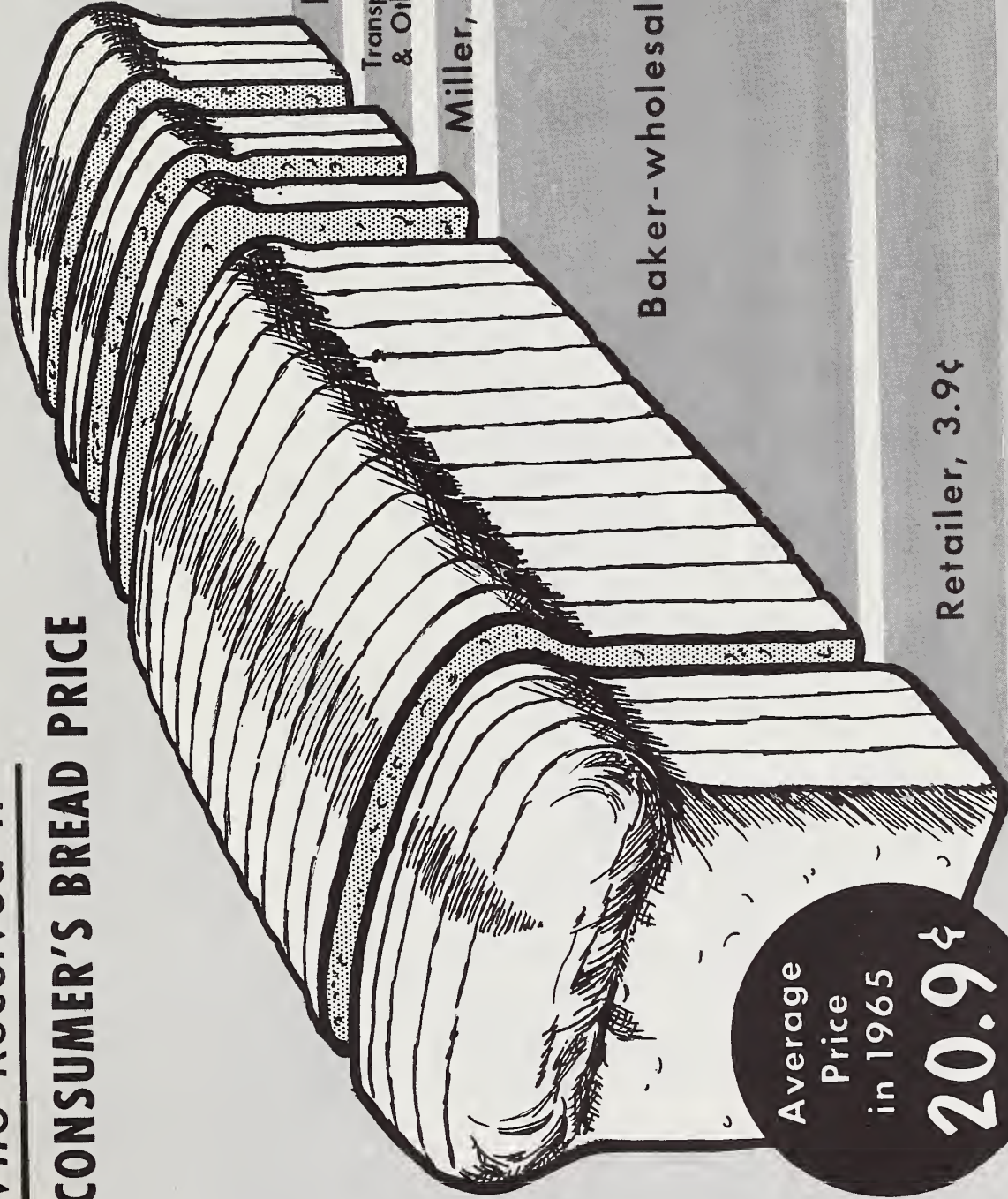
We urgently solicit the full cooperation on the part of the industries involved to assure us that we are making accurate interpretations. We welcome the opportunity to improve our statistics through use of data supplied by industry. We hope that the promising start is a harbinger of continued cooperation in the future.

Harlan Cleveland, Assistant Secretary of State for International Organization Affairs, made a significant comment in a talk on "The Blurred Line Between 'Public' and 'Private.'" 4/ "Compared to a generation ago, our private enterprise system is just as enterprising as ever, but not nearly so private." Cleveland noted that business firms and their managers are acting more and more in ways that tend to blur the division between public and private. This blurred line of which Mr. Cleveland spoke is especially true in the case of bread, a basic food item, which is of extreme public as well as private interest.

4/ "Ethics and Bigness: Scientific, Academic, Religious, Political, and Military." Edited by Harlan Cleveland and Harold D. Lasswell. Papers for 16th meeting of Conference on Science, Philosophy, and Religion, Harper & Bros., 1962.

Who Received It *

CONSUMER'S BREAD PRICE



Average
Price

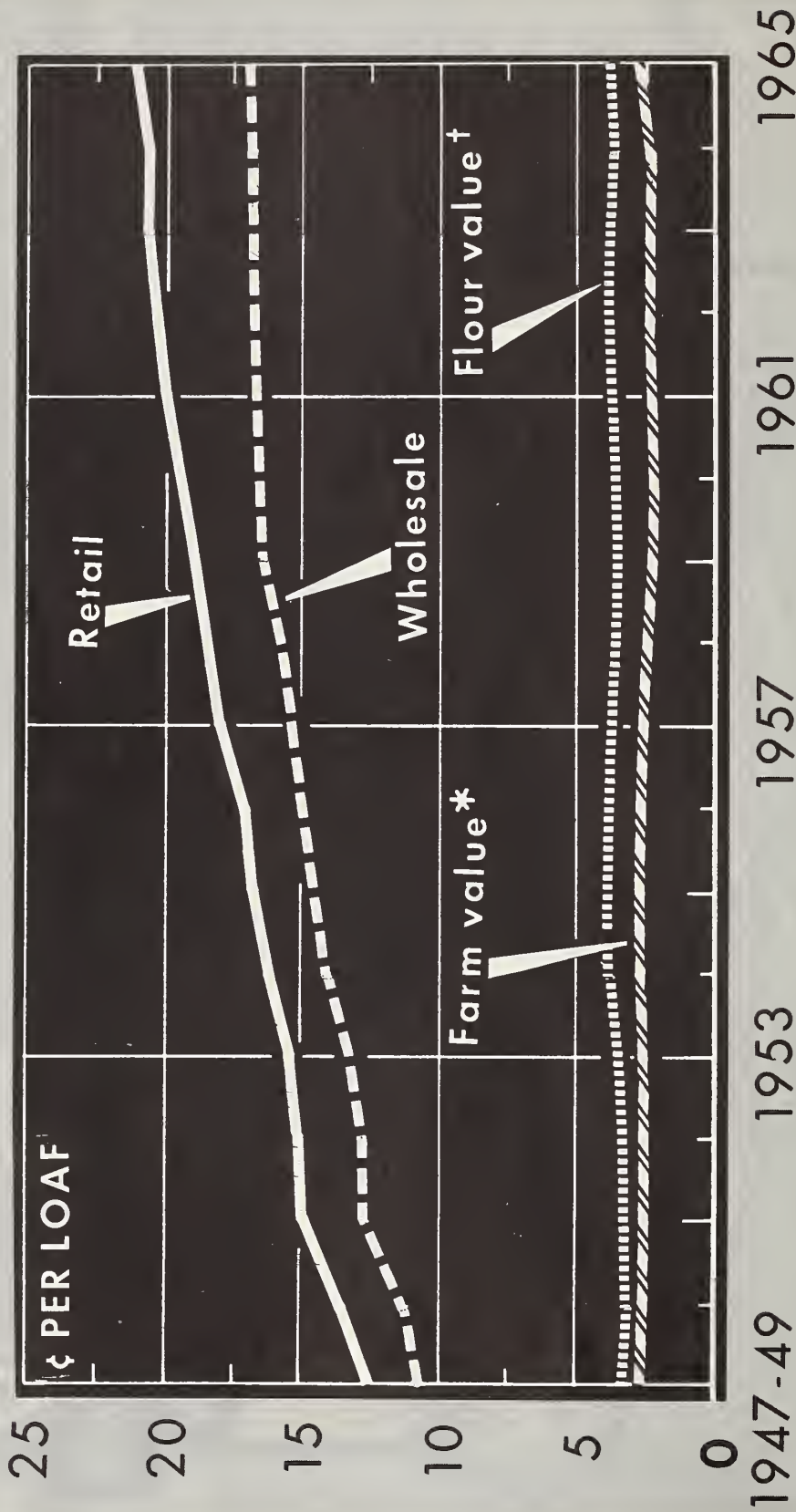
in 1965

20.9¢

*RECEIVED TO COVER PROFITS AND COSTS, EXCEPT FOR INGREDIENTS AND PURCHASES FOR RESALE.
1965 DATA ARE FOR FIRST 9 MONTHS.

WHITE BREAD PRICES

U. S. Average

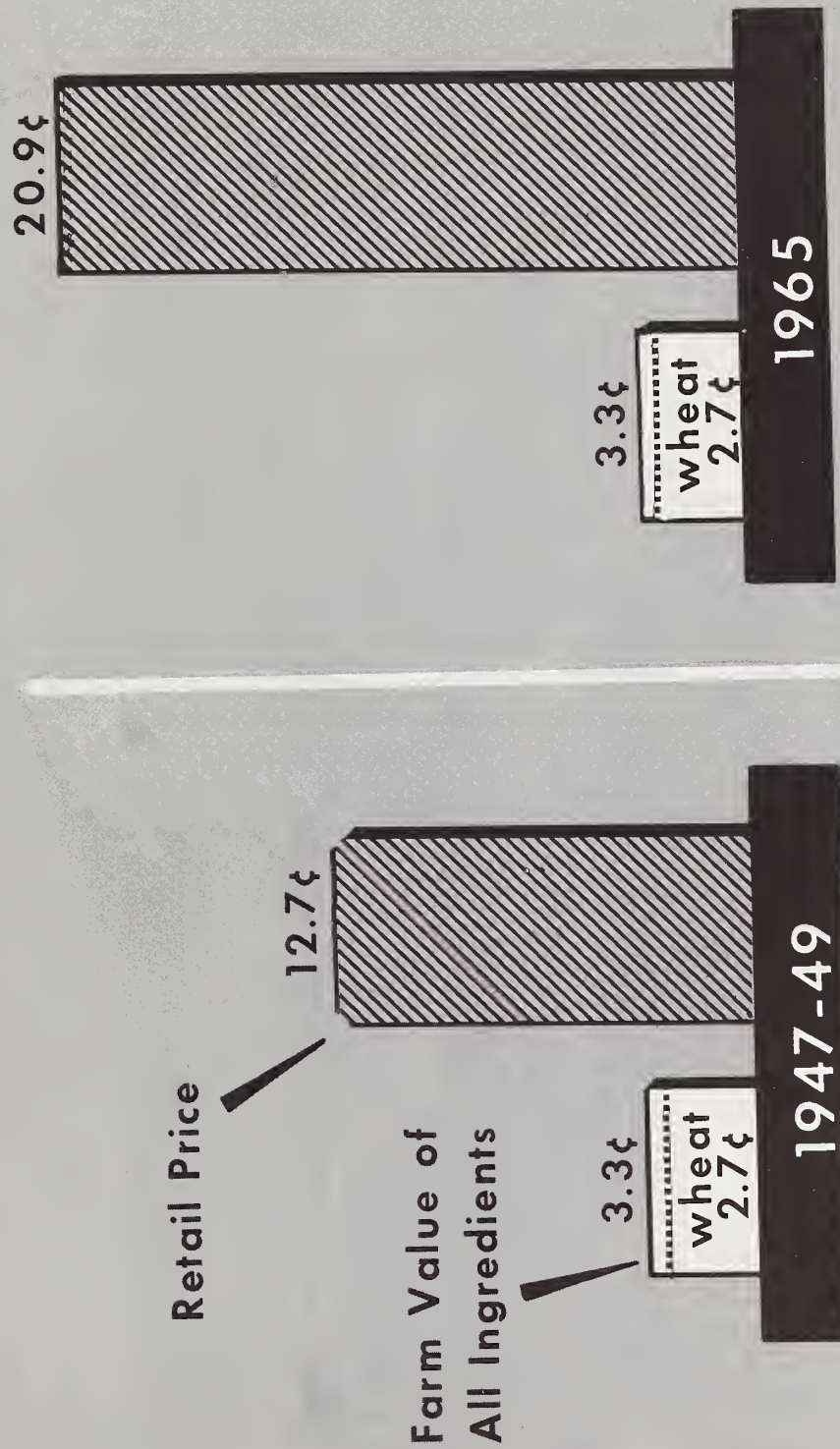


† MILL SALES VALUE.

* WHEAT CONTENT.

1965 DATA FOR FIRST 9 MONTHS.

FARM VALUE OF INGREDIENTS AND RETAIL PRICE OF WHITE BREAD



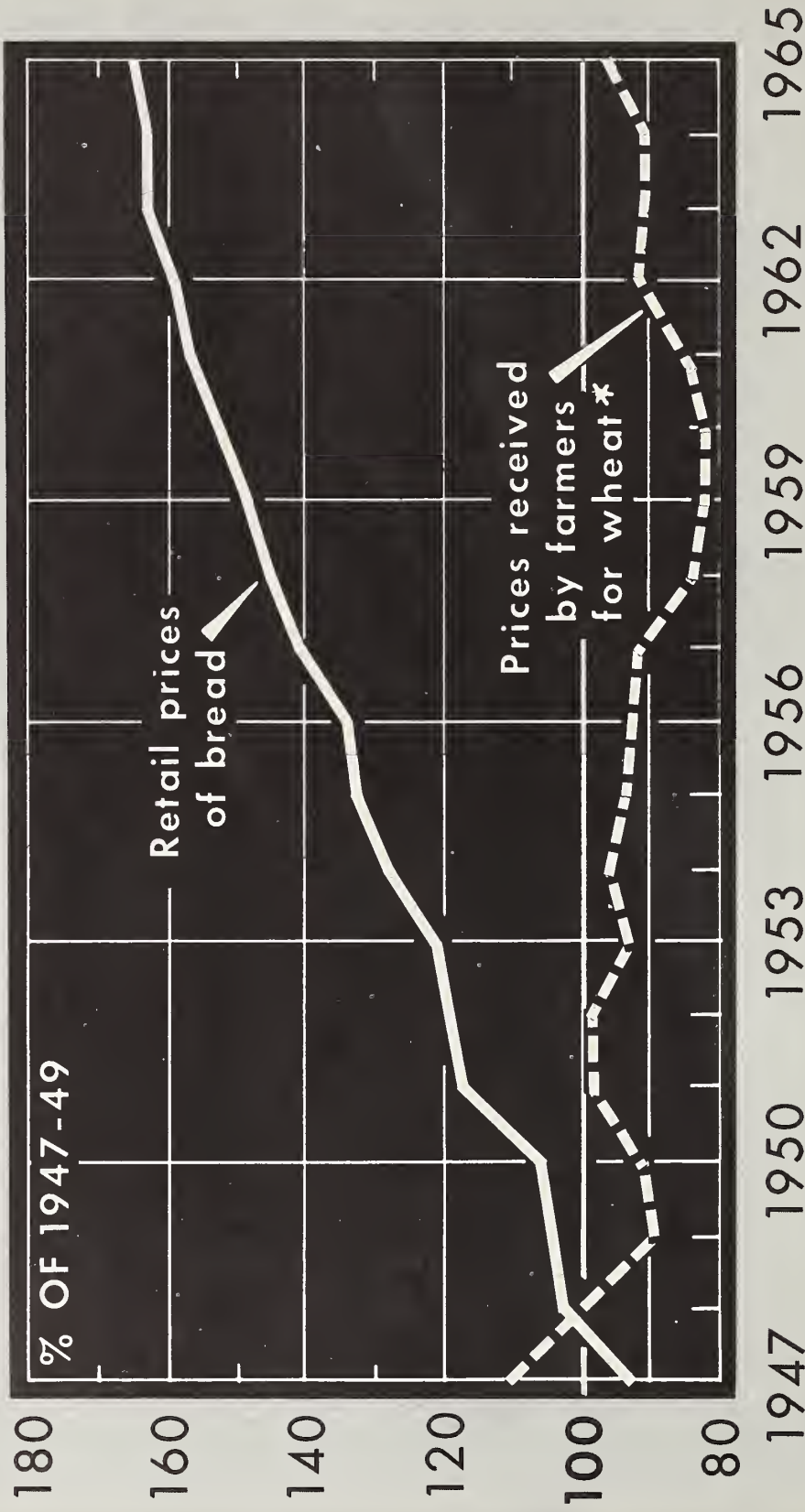
1965 PRELIMINARY.

U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 4005-65 (10) ECONOMIC RESEARCH SERVICE

Figure 3

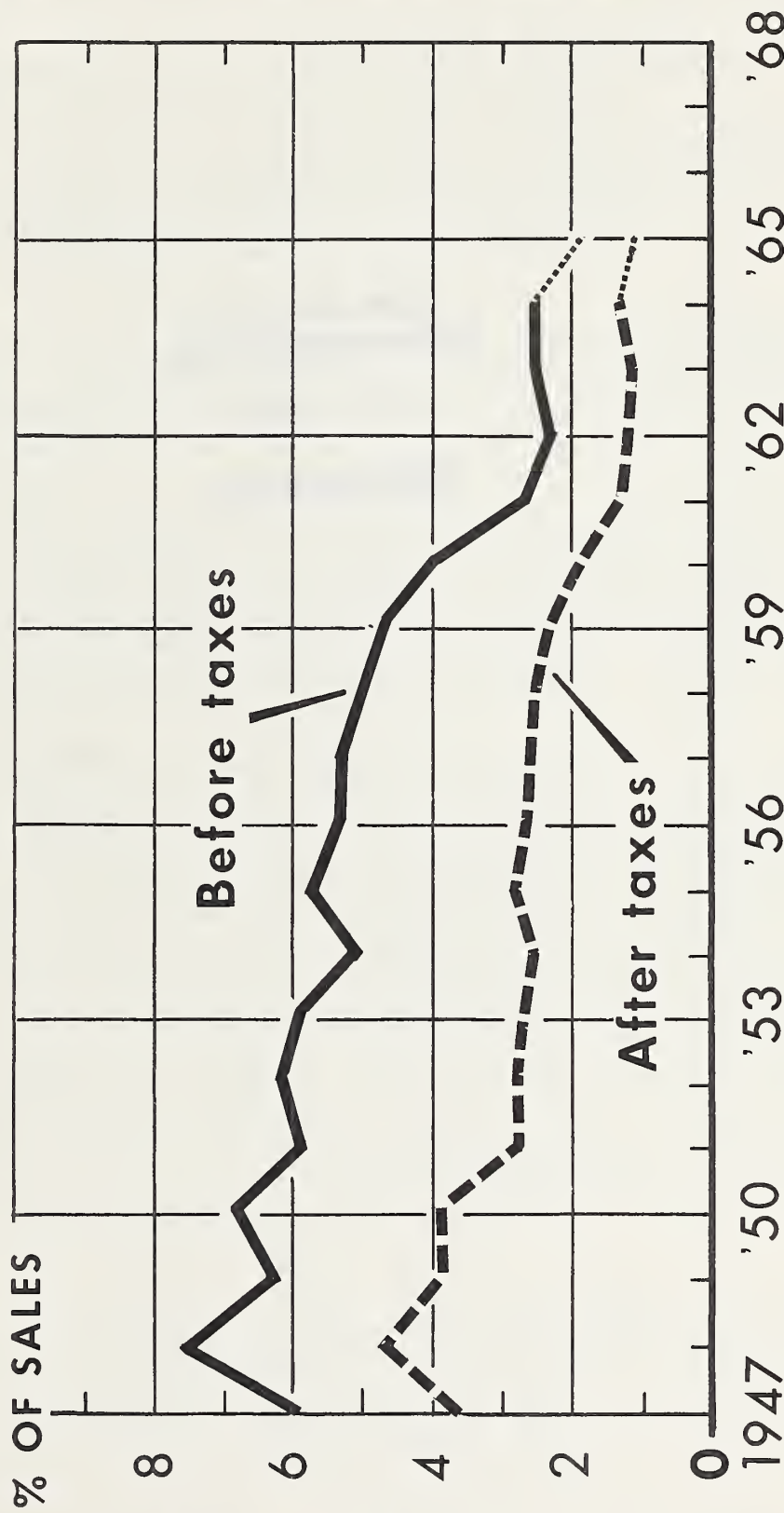
WHEAT AND BREAD PRICES



* INCLUDES VALUE OF WHEAT MARKETING CERTIFICATE IN THE SECOND HALF OF 1964.
1965 DATA ARE FOR FIRST 9 MONTHS.

As Percent of Sales

PROFITS OF FIVE MAJOR BAKING COMPANIES



1965 ESTIMATED.

Figure 5

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UNITED STATES DEPARTMENT OF AGRICULTURE
Economic Research Service
Washington, D.C. 20250

MARKETING RESEARCH: A TOOL FOR DECISION MAKING

A Look Ahead at the Food Service Industry

Presented by Kenneth E. Ogren, Director, Marketing Economics Division, at the spring meeting of the Society for the Advancement of Food Service Research
Washington, D.C., April 18, 1966

Change is the single most important characteristic of our economy. With change comes new problems and new challenges for the marketing of food products. The more rapid the change, the more flexible and adaptable must be our food marketing system.

In no part of the entire food industry, from farm to consumer, is the prospect for change in the next 10 to 20 years greater than in the food service industry. Change in terms of the total market, the types of food and services supplied to this growing market, and change in terms of the number of eating places, their size, location, and services they supply.

The prospects for the future in the food service industry are exciting. So also is the prospect of helping this industry thru research. Our role, as an agency doing marketing research, is to identify and observe changes taking place in the economic organization and operation of this system and to make findings available to the public. Our role is not to make the decisions, but to provide management with information so that they may make better decisions. Marketing economics research, as is true of any research, to be the most effective must anticipate problems that need research in time so that our research results are not a documenting and reporting of historical facts but provide answers to real problems. This is not an easy challenge in these days of rapidly changing technology. Perhaps we can all take some refuge in the following statement: "The world is changing so fast nowadays; you couldn't be wrong all of the time even if you tried."

Today I would like to take a look ahead at what the future of your industry can be, and to make some projections--not predictions--regarding this future, and to identify some of the problems and factors that will affect the course of your growth. Finally, I will describe briefly to you the large study that we are undertaking on the food service

industry with the cooperation of many industry groups. This study will provide many facts about the food service industry that will give us a spring board for better identification of the industry and provide a basis for further studies to help answer specific questions or problems. Research to be most effective must be cumulative. What we learn from one study will give us more information for the better planning and conduct of future research.

A \$35 Billion Market in 1975?

We estimate that the market for away-from-home meals and snacks in 1965 totalled \$20 billion or more--the exact figure we are not sure of. Is talk of a \$35 billion market in just 10 years outrageously unreasonable? To see how reasonable this projection may be, let's take a look at some trends or factors that will help determine the size of the market.

Number of customers -- The market will increase first because there will be more people in 1975 (fig. 1). Projections of the Bureau of the Census show that our population may double its present 196 million sometime around the turn of the century. In the next 10 years, potential customers for the food service industry should rise by 30 to 35 million people.

Income -- Perhaps even more important than the expected population growth is the projected increase in income. The increase in family incomes has been dramatic in recent years. The median income of U.S. families has doubled since 1950, from approximately \$3,300 to \$6,600 in 1964 (fig. 2). This is in current dollars, unadjusted for changes in price levels. In constant dollars the increase is somewhat less, as shown in figure 2. Projections of income based on a full-employment economy show that in the next 10 years incomes will rise by more dollars per person than in the last 10 years (fig. 3).

No factor is more important than income to the size of the away-from-home market for food. Data from the survey of food expenditures by the Bureau of Labor Statistics in the early 1960's shows the tremendous potential of growth for your industry thru higher incomes. Average expenditures for food eaten away from home by the median income group (around \$5,000 per year) was about \$200. However, for those families with incomes of over \$15,000, food expenditures away from home jumped to almost \$900 per family--more than four times those with incomes of \$5,000 (fig. 4). Looking at it another way, the percentage of total food expenditures represented by consumption away from home rises steadily with increases in income (fig. 5). For families with

incomes of over \$15,000, away from home consumption amounted to almost one-third of their total food budgets compared with about 18 percent for the median income.

Where people live -- The number of people and their incomes are critical elements in determining your food market; other characteristics of the population also are important. Farmers and other families living in rural places have traditionally produced a substantial part of their own food supply. Their purchases have been mainly for food consumed for food at home. Urban families in the Bureau of Labor Statistics 1960-61 survey spent, on the average, double that of farm families on food-away-from home and about two-thirds more than rural nonfarm families. 1/

The percentage of our total population represented by farmers and others living in rural areas (places of 2,500 population or less) has dropped sharply in the last four decades (fig. 6). Further increases in the proportion living in urban and metropolitan areas are probable. However, even among farmers and small towns people, the proportion of their food grown for their own use is decreasing and their living patterns--including eating away from home--are becoming more indistinguishable from that of their city cousins.

More services, fewer blue collar jobs -- Services are becoming more and more important in our family expenditure patterns. This is reflected in the changing composition of the labor force that produce farm products and other goods compared with those providing services. Back in 1870, only one-fourth of our labor force was engaged in providing services. By 1964, this percentage had risen to three-fifths. A further increase is projected for 1975 (fig. 7).

The next chart shows in a different form the change in composition of our labor force with respect to major occupational groups. White collar workers, only one-sixth of our population at the beginning of the century, are expected by 1975 to account for almost one-half of the total labor force (fig. 8). The proportion of farm and blue collar workers

1/ The average expenditure of urban families was \$272 compared with \$178 for rural nonfarm families and \$138 for farm families. Source: Consumer Expenditures and Income Rural Farm Population, United States, 1961, USDA Consumer Expenditure Survey Report No. 5, April 1965

in the population will continue to decline. These changes affect your potential market in many ways--not only is the number of lunch pails likely to drop, but the type of food and services required is subject to significant change.

A summing up -- Now let's put all these factors together to see how reasonable the \$35 billion figure is for 1975. Today we have about 48 million families, 9 million of which have incomes of over \$10,000 per year. These families spent, in 1960-61, about \$600 per year for food away from home, which is equal to a total of about \$5 billion. By 1975, we will likely have 57 million families and at least 30 million of them may have incomes of over \$10,000 (fig. 9). If these families spend \$600 a year for food away from home, that alone adds up to more than \$18 billion: almost equal to the total expenditure for food away from home today.

Eighteen billion dollars a year is a conservative estimate for potential expenditures by families with incomes \$10,000 and above: It is predicated upon the assumption that families moving up the income scale will act like those already with incomes over \$10,000. It takes into account the many families moving from under to over \$10,000. It does not provide for the many families moving further up the economic scale--into the \$20,000 and over group.

A recent study in the Twin Cities, Minneapolis-St. Paul, provides an indicator as to what the high-income families--over \$20,000--are doing. These families were spending an average of more than \$1,200 for food away-from-home. This amounted to 40 percent of their total food expenditures. 2/

Suppose then that we assume an average expenditure of \$800 per family in the over \$10,000 income group. This is not a large rise from the \$600 level of 1960-61 when we consider the changes in where people live, shifts in occupation, more time for recreation and travel, along with the prospect that there will be a sharp rise in the number of families with incomes of over \$20,000 per year. The assumption of \$800 in family expenditures for food away from home for the families of over \$10,000 income would raise the total for these families to at least \$24 billion and leave \$11 billion in expenditures for all remaining away-from-home expenditures.

2/ Minnesota Farm Business Notes, No. 480, January 1966, "Food Expenditures By Minneapolis-St. Paul Families: Variations and Implications," by Marguerite C. Burk

Problems and Prospects

The \$35 billion market in 1975 is a projection, NOT a forecast. Whether it is too conservative or too optimistic depends mainly on the decisions made by you and other leaders in this industry. What could keep you from not achieving this figure? Perhaps the most critical item is the growth rate of our economy. The continued high rate of economic growth is certainly most essential to your growth.

The growth rate of the economy is largely outside your control. Other factors are not necessarily outside of your control. For the most part, consumers make a choice to consume food away from home. In fact, it is almost entirely a matter of choice; even for school children and workers, it is possible for most of them to carry a bag lunch if they choose.

Research has documented quite conclusively that as income rises, food expenditures become relatively less important in the consumer expenditure pattern, even though the actual expenditure for food does rise. Surveys of family expenditures also show that expenditures for services rise with higher incomes, as a percentage of income as well as total expenditure. In the 1960-61 survey, the percentage of income going for food eaten away from home was just as large in the high-income as in the low-income groups. This relationship was confirmed by the Twin City survey for families with incomes above \$20,000.

For most of our consumers, incomes are sufficient for good eating. The choice is what foods, and more important to you, do they choose to buy extra services with this food? For example, in the Twin City survey, half of the homemakers interviewed replied they didn't need to spend any additional money to buy the quantity and quality of food they felt their families would like. The choice of eating food away from home becomes an item of recreation, an item of labor saving, and getting away from the drudgery of home cooking.

The price, the quality, the availability of your services in relation to alternatives are likely the key decision factors for the consumers. The cost of the meals away from home has risen much faster than has the average of all items in the consumer price index. Compared with changes in prices of food in the grocery stores (the food-at-home line in figure 10), your prices have climbed even faster. In comparison with your grocery store competitor, your record on prices is not good. You have continued to grow despite higher prices. Factors such as increasing urbanization, higher incomes, more working wives, etc.--these are the factors that have provided the growth for your market. Cost pressures on your industry

are not likely to subside in the near future. Continued increases in the price of food away from home will make your service relatively less attractive to the consumer; how much effect price has on demand for restaurant meals is not available from research at present.

You face another element of competition--your own suppliers, the food processors. These food processors are continually searching and finding ways to make foods more convenient for the homemaker. Ready-to-cook and ready-to-serve foods now are commonplace. As their quality improves and prices on a relative basis drop, this can provide major competition to you in your efforts to entice the consumer to buy his food in the form of restaurant meals.

How to provide high-quality food and service at attractive prices to the potential customers of 1975 is the major key to the large growth I have projected in the next decade.

Being in the right place at the right time is also crucial in your planning for the future. The Twin City survey shows the dynamic character of your market, with respect to influence of high income on total expenditures and on the location of the market. About 40 percent of the expenditures for food away from home by the highest income group was spent in places outside the Twin City areas, reflecting their travel and vacation and out-of-town college expenditures (fig. 11). The United States is now entering a most significant social revolution, that of leisure time. You have a great stake in sharing the fruits of this revolution.

Research: A Beginning

I have used research information to give you some idea of market expectations for the future. I have tried to suggest that reaching this target of a \$35 billion market is by no means automatic. And further, that all the research information possible from both public and private agencies is no guarantee of success. Research is only one of the necessary ingredients.

I have drawn on a large amount of research data today to construct this projection of a \$35 billion market. But this research data is only a beginning. Let me emphasize that what I have constructed is just a skeleton with some shaky underpinnings. Before this skeleton of the future can become a living reality, we need to know more about its probable components and makeup. Who will eat where, what

foods, what services--it is one market, but it is also many different markets; snacks, cafeteria meals, sandwiches from a vending machine, hamburgers and hot dogs, dinners out in sumptuous restaurants, working-day meals and eating out on vacations. To project the most meaningful picture of this market of the future, the answers to the makeup of today's market are essential.

The Economic Research Service is now launching a large and exciting research project to learn more basic information about the food-service industry. We have been 3 years in reaching this launching stage. It is only through cooperation with many industry groups that we have reached this point. Cooperation in planning this project, furnishing data, and in financing the cost of the survey. Industry cooperators include the food-service industry and the suppliers to this industry--farmers, food processors, and equipment manufacturers.

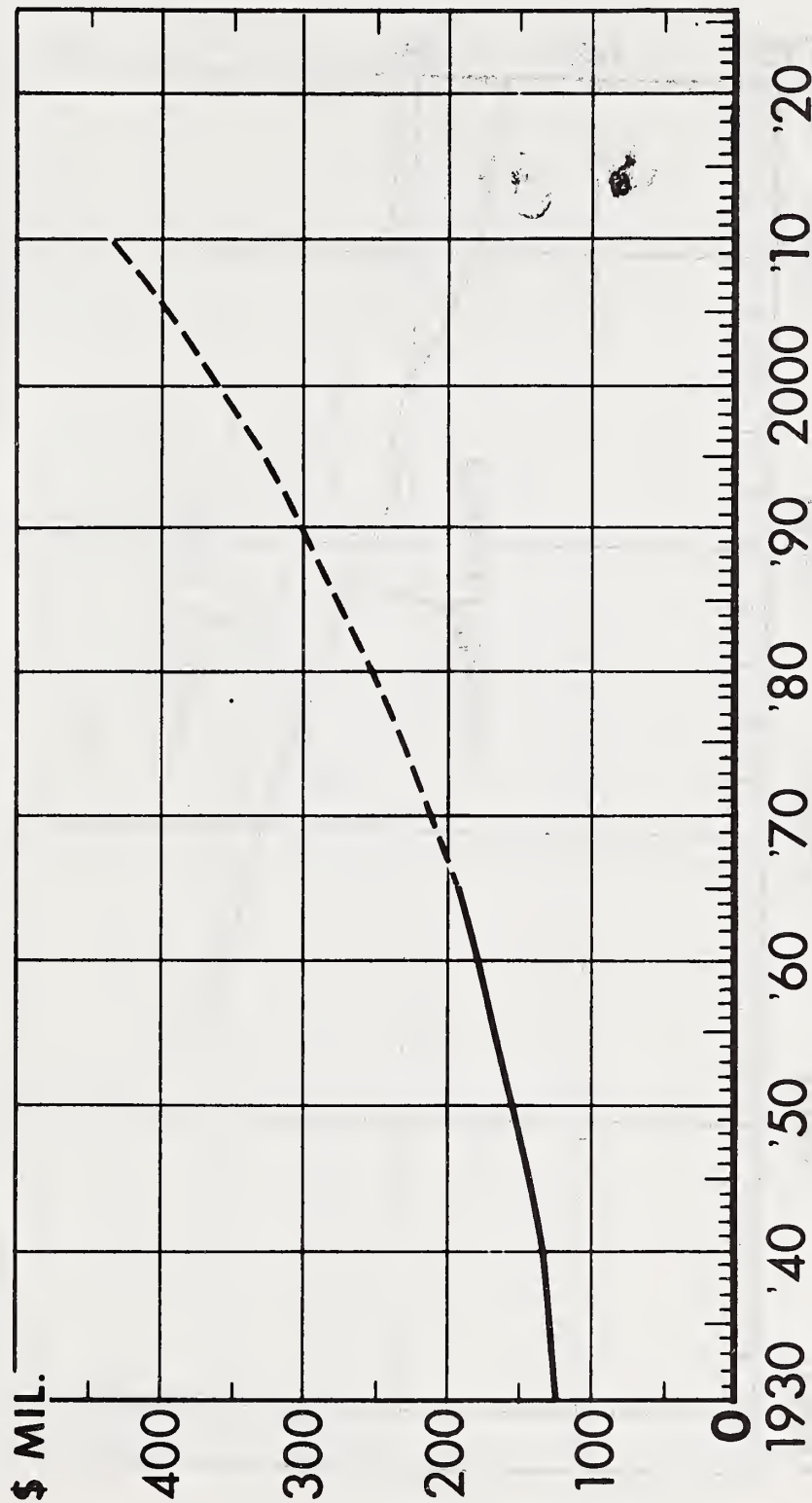
Briefly, the project has two major phases. The first one is a nationwide survey of about 6,000 restaurants and other away-from-home food markets. This survey will focus on the structure of the food-service outlets, emphasizing such items as types and size of the outlets, number of employees, food services offered, food cost-sales ratios, purchasing practices, and the types of equipment in current use.

The second phase, scheduled to begin late this year, will break down into segments the market for individual foods, by quantity, form, container sizes, prices, and by user characteristics. This collection of detailed information on quantities of foods used in eating places will be phased over a 1 year period to minimize seasonal variation in food usage.

This survey is thus aimed at providing the kind of information about the food-service market that we have had in far greater detail over the past 20 years about the retail food market and the household market for food. This information should help answer questions asked about your industry such as what quantities of the various food products are used by these away-from-home food outlets. Are the quantities, qualities, and kinds of foods eaten away from home similar or sharply different from the home market, and what is the variation between the various types of food service outlets? How, where, and from whom do these outlets buy their food products? How important are they as markets for new foods, for convenience type foods?

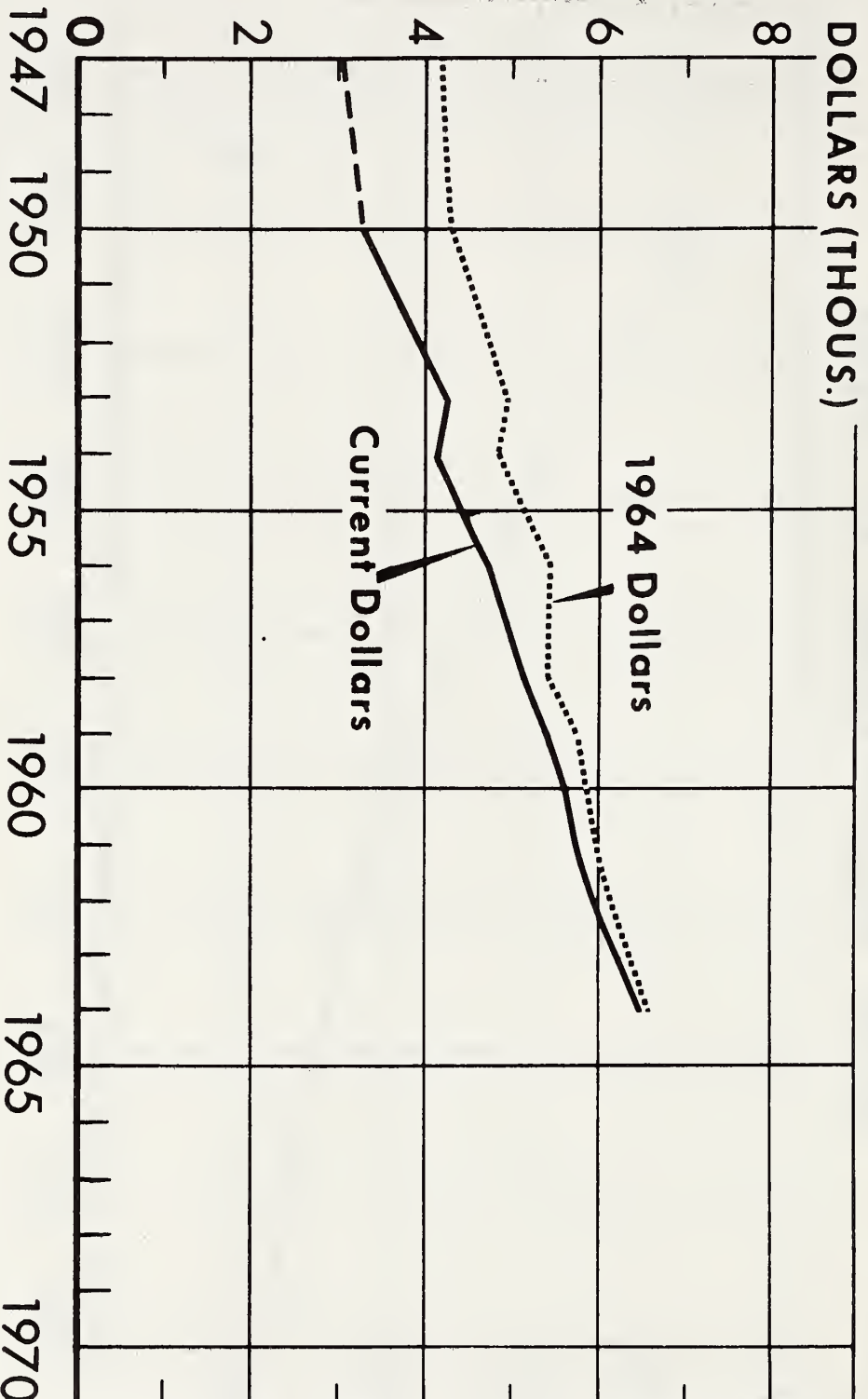
Answers to these questions will give a better benchmark as to your industry today. Massive as this survey is, its information is only a starting point to further research on the changes and adjustments to change that will take place in the future. We hope that our present study is only a beginning of a continuing program of research that will help make our research a finely honed tool for your decision making.

U.S. POPULATION GROWTH SINCE 1930 WITH PROJECTIONS TO 2010



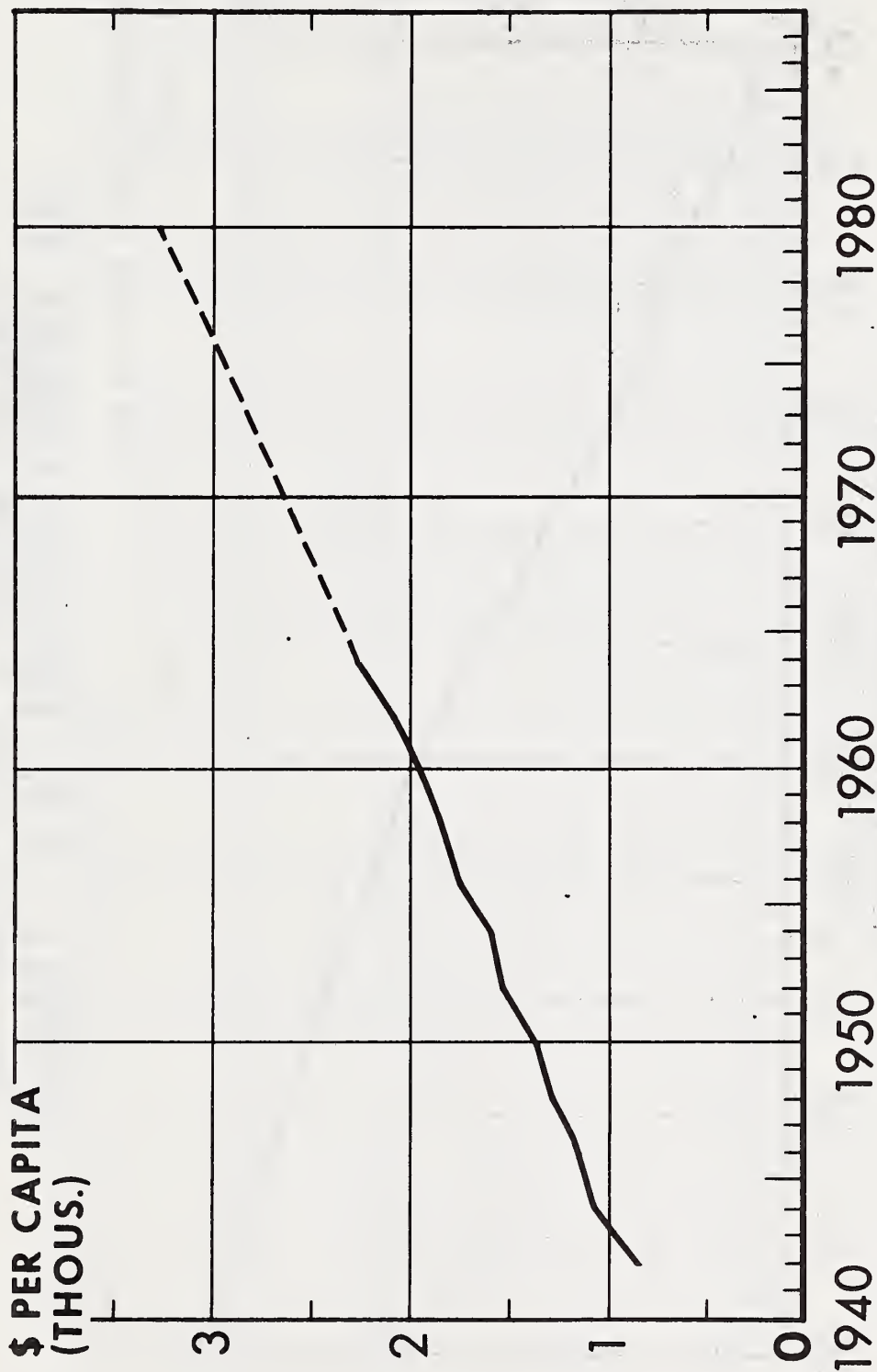
SOURCE: BUREAU OF THE CENSUS

THE MEDIAN INCOME OF U.S. FAMILIES



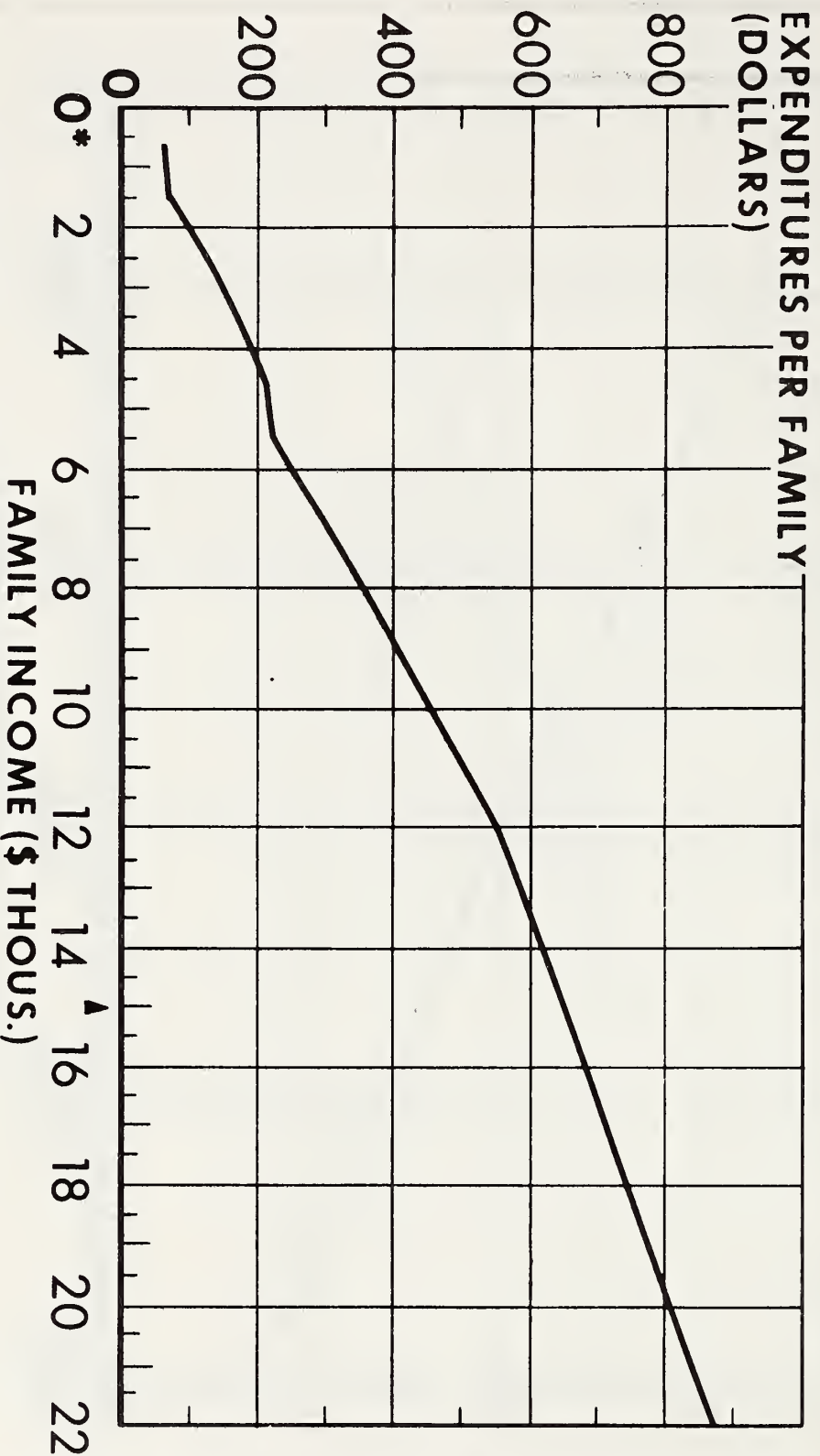
SOURCE: BUREAU OF THE CENSUS

DISPOSABLE PERSONAL INCOME, U.S.



SOURCE: U.S. DEPARTMENT OF COMMERCE

FOOD EXPENDITURES AWAY FROM HOME BY FAMILY INCOME, U.S., 1960-61

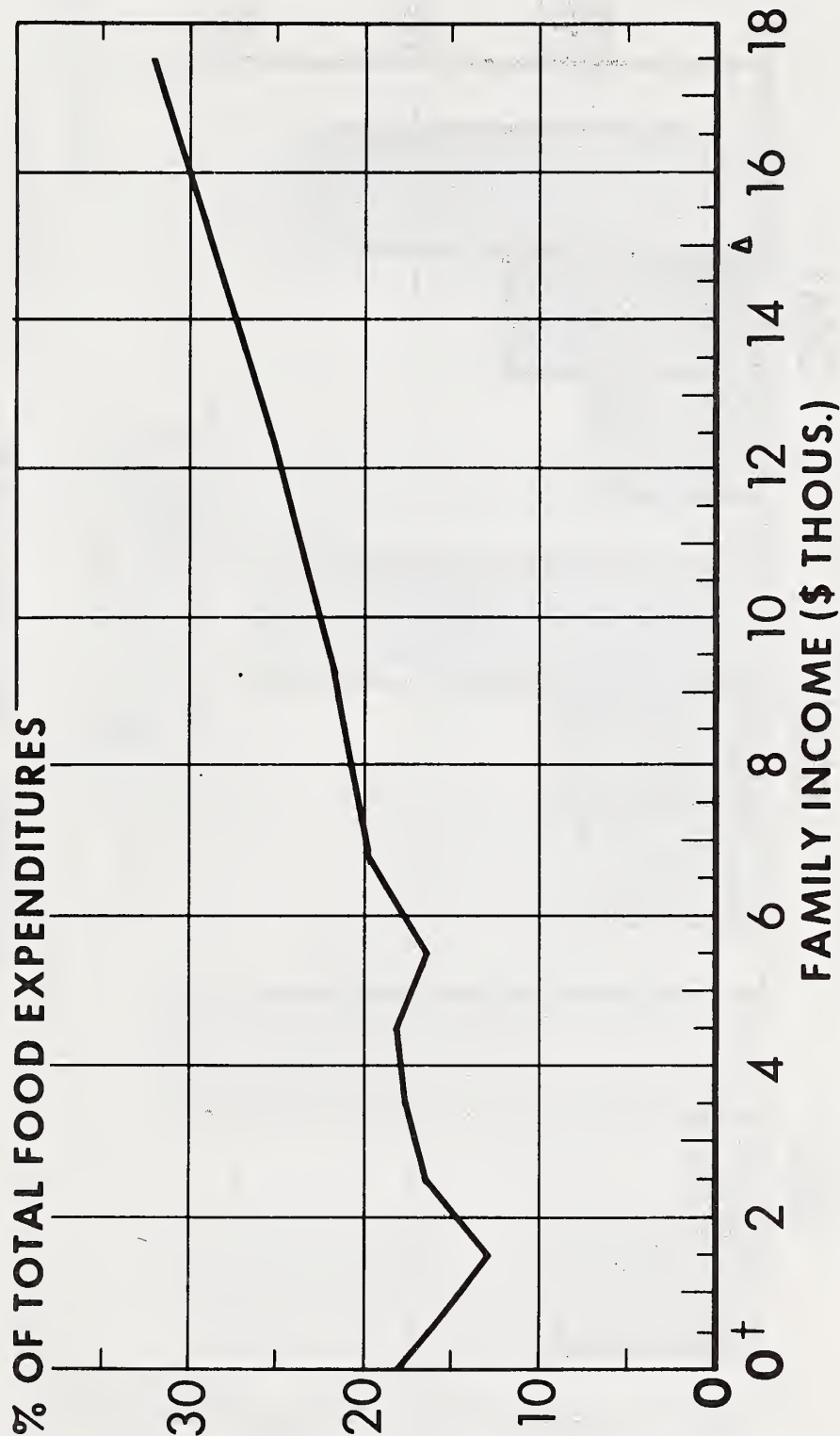


* UNDER \$1,000

▲ \$15,000 AND OVER.

SOURCE: BUREAU OF LABOR STATISTICS

SHARE OF FOOD MONEY SPENT ON FOOD AWAY FROM HOME*



* BY INCOME LEVELS.

† UNDER \$1,000. † \$15,000 AND OVER.

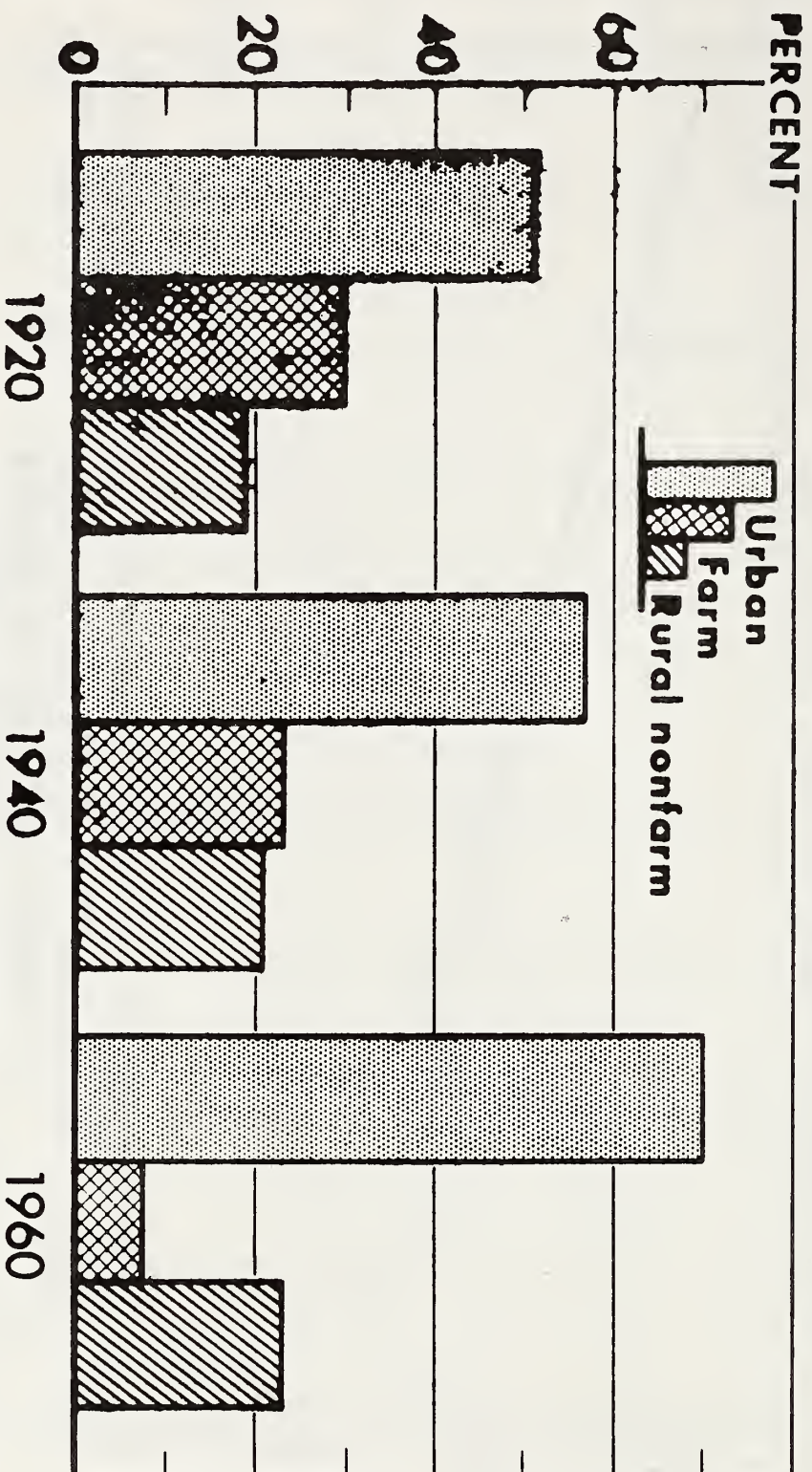
SOURCE: BUREAU OF LABOR STATISTICS

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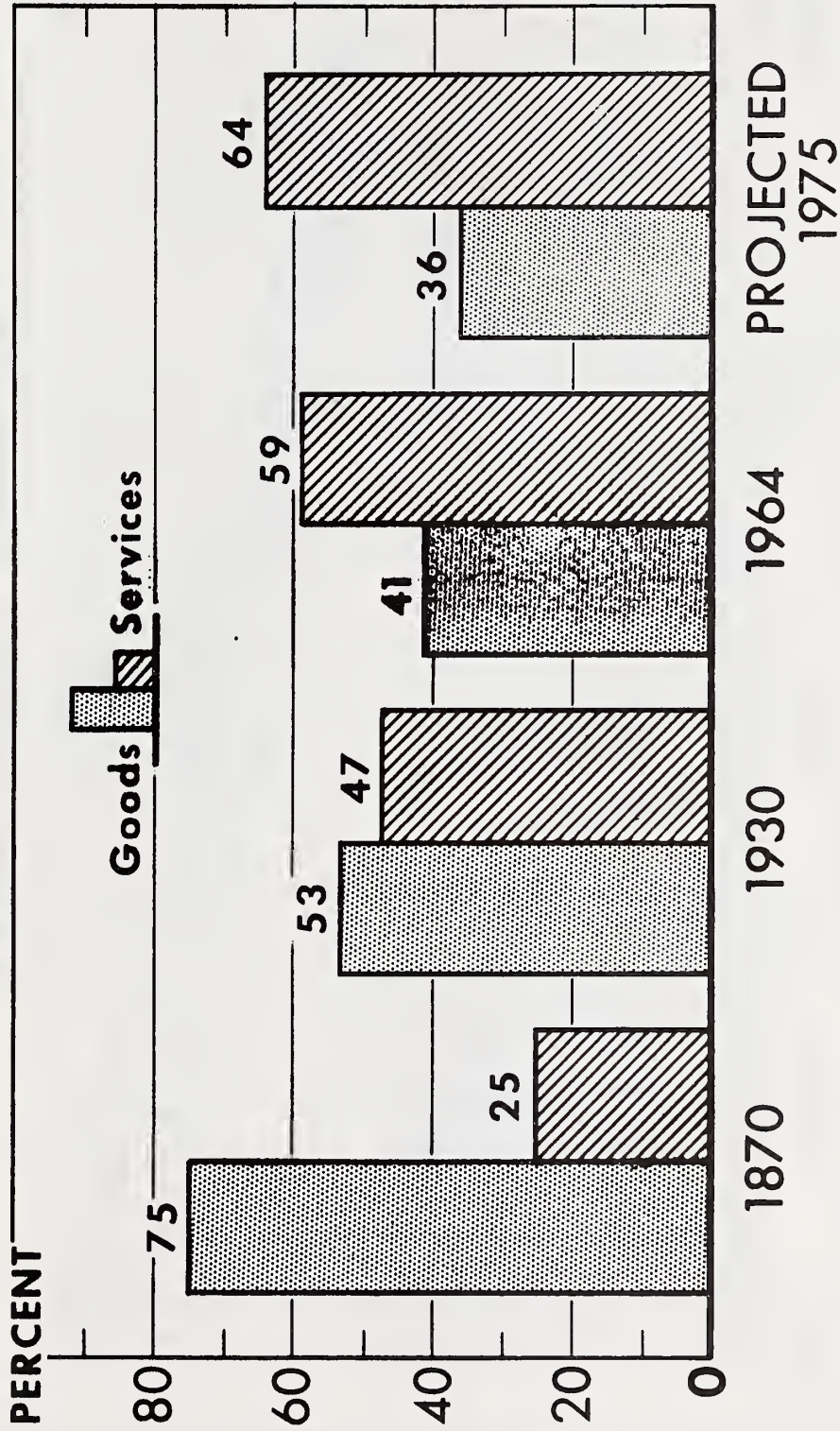
Fig. 5

PERCENT OF POPULATION IN URBAN AND RURAL AREAS

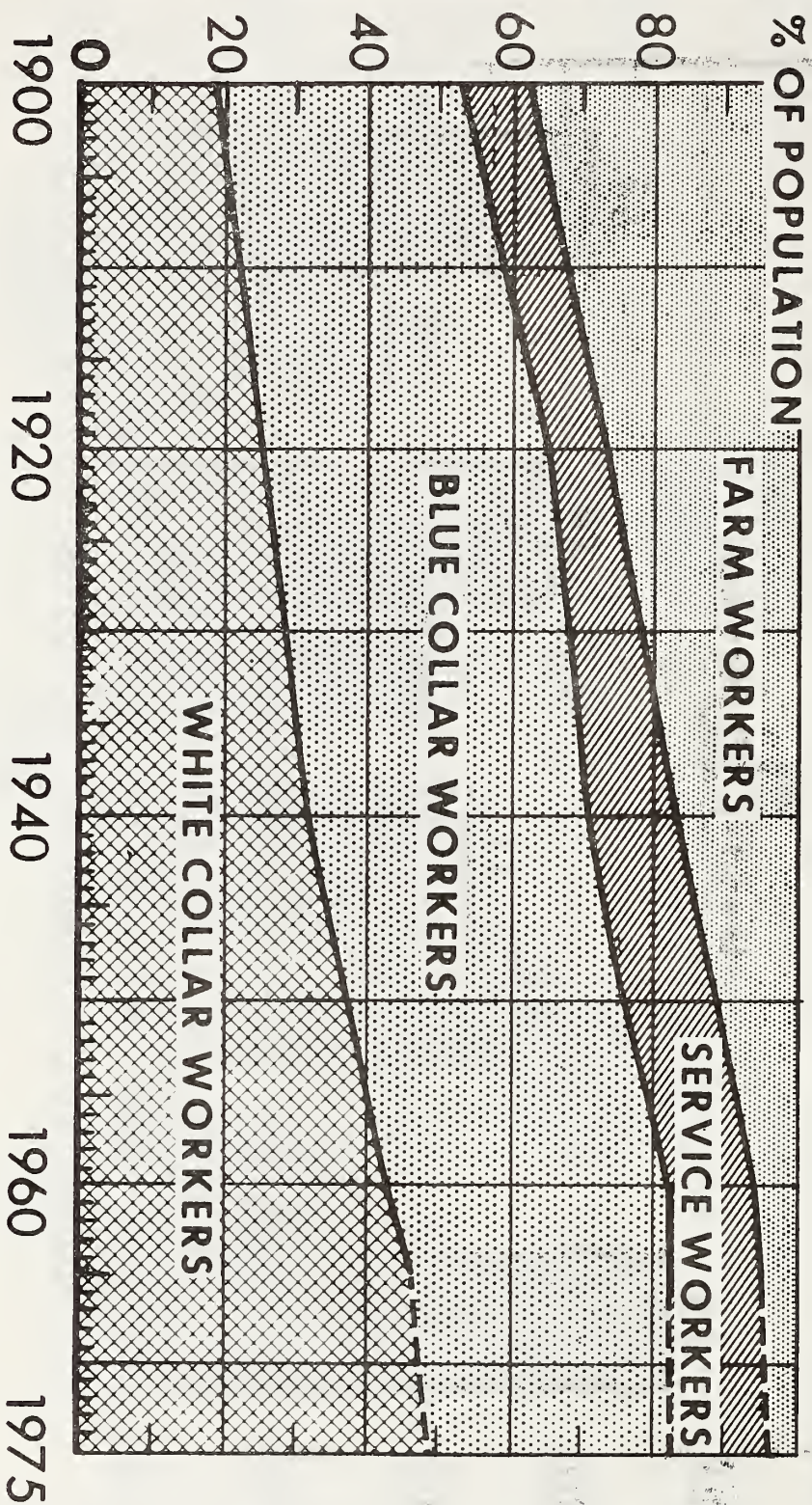


SOURCE: BUREAU OF THE CENSUS

INCREASING SHARE OF LABOR FORCE PROVIDING SERVICES

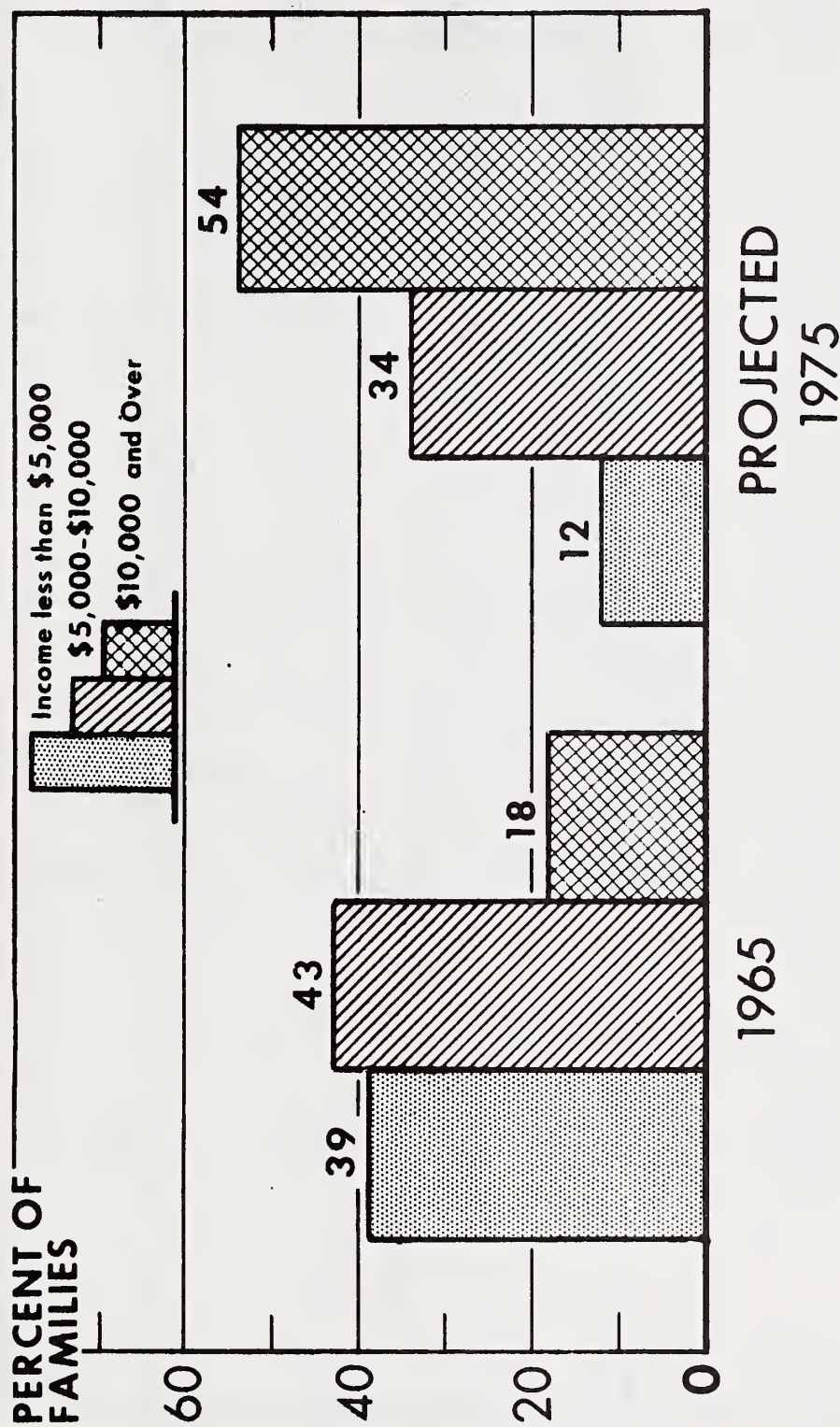


CHANGING MAKEUP OF U.S. CIVILIAN LABOR FORCE

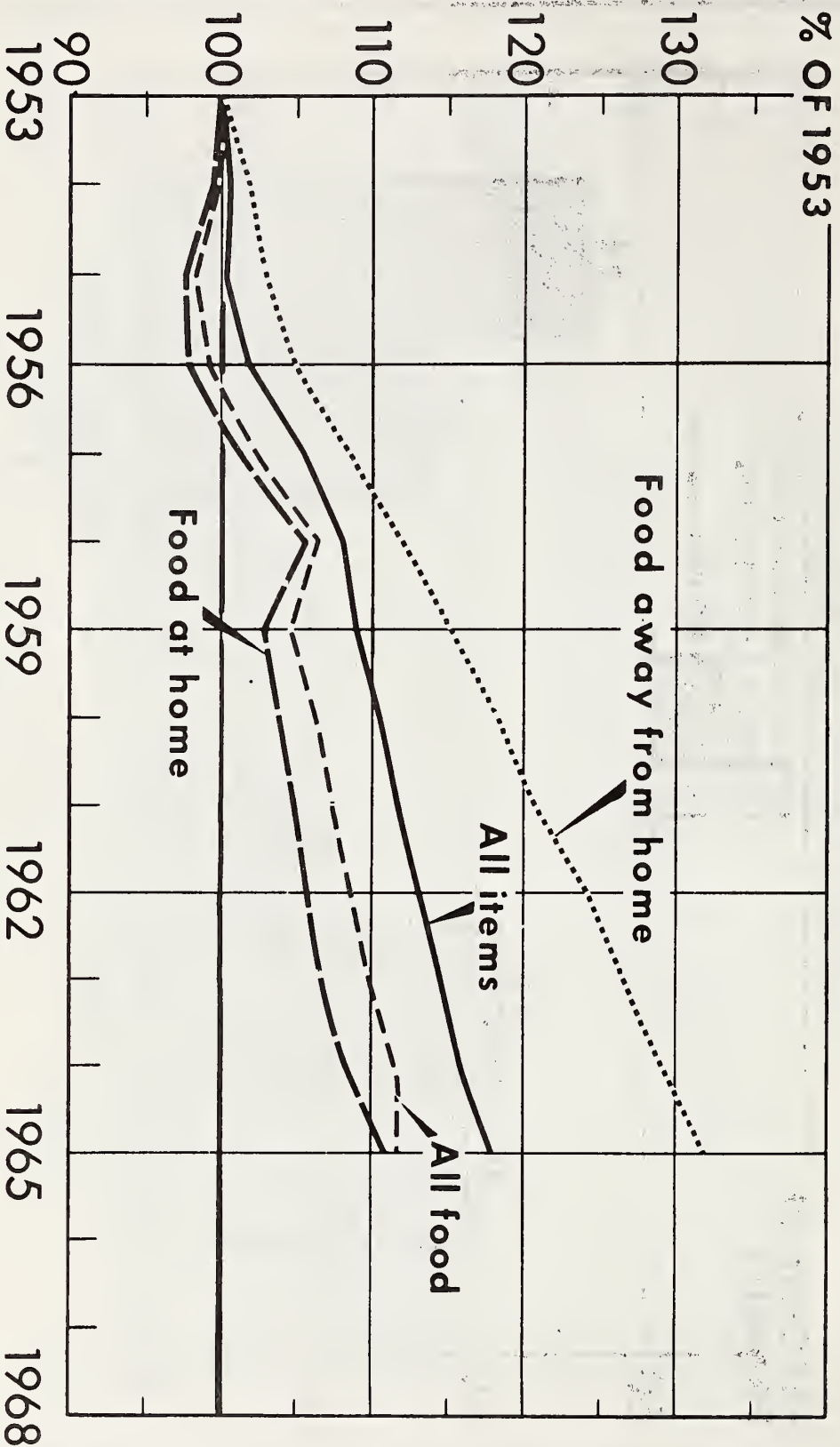


SOURCE: U.S. DEPARTMENT OF LABOR

DISTRIBUTION OF U.S. FAMILIES BY INCOME CLASS



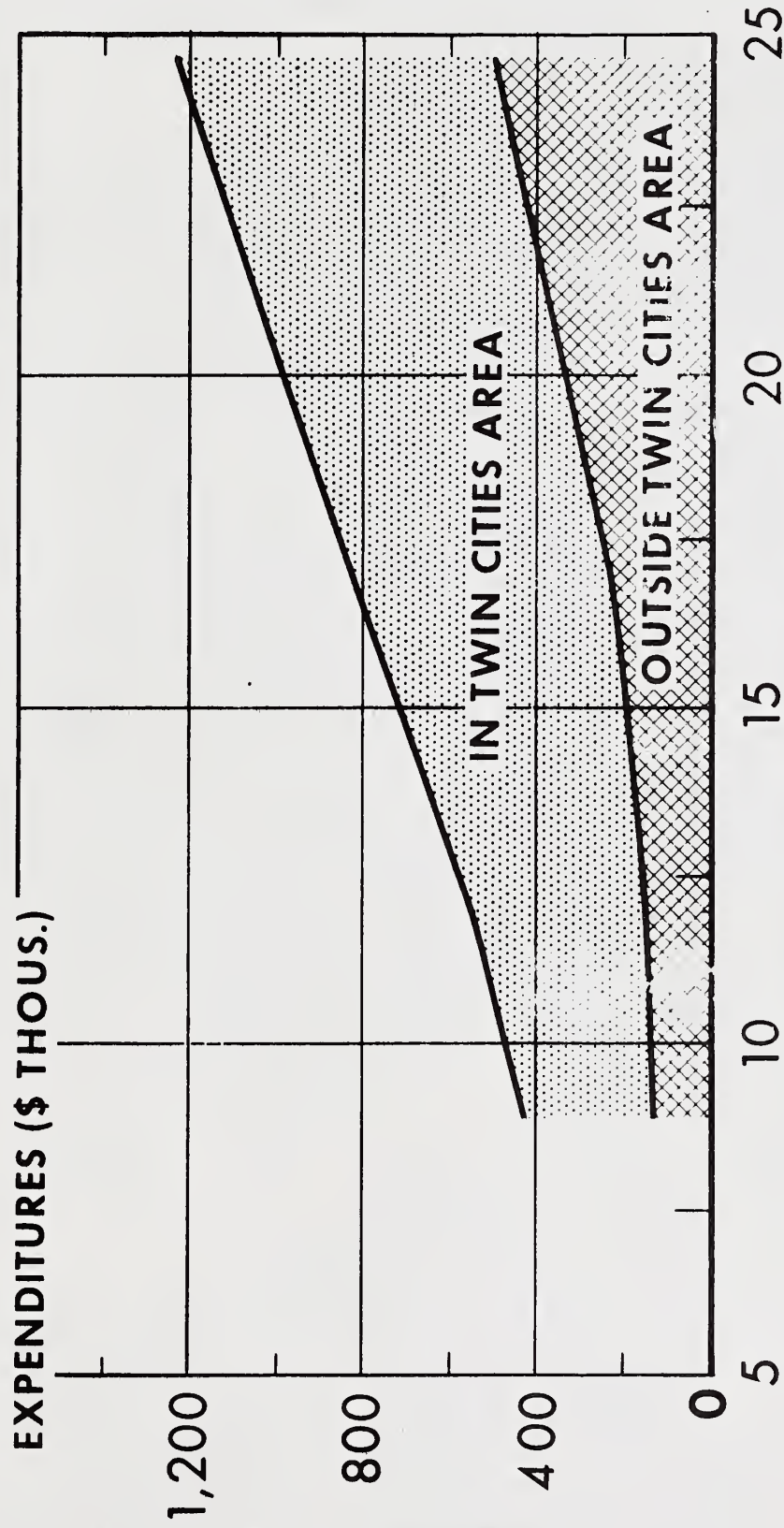
CONSUMER PRICE INDEX



SOURCE: BUREAU OF LABOR STATISTICS

FOOD AWAY FROM HOME EXPENDITURES

By Twin Cities Upper Income Families, 1964



FAMILY INCOME (\$ THOUS.)

PRELIMINARY DATA FROM UNIVERSITY OF MINNESOTA SURVEY, 1965.

